Amateur Radio

Volume 78
Number 5
May 2010
Price: $7 incl GST

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100 YEARS 1910 ~ 2010 WIRELESS INSTITUTE OF AUSTRALIA

duplexers
diplexers
triplexers
what are they?

Arena of Wonder
The freeing of amateur radio

VK2FEMM on the air at AJ2010

The 2010 Australian Shires Contest Rules

ISSN 0002-6859

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* E for European Version
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The Journal of the Wireless Institute of Australia

GENERAL

TECHNICAL

COLUMNS

Our cover this month

Emma VK2FEMM enjoying a contact from her Troop camp site during the Australian Jamboree 2010, held in January at Cataract Scout Park south west of Sydney. Fishers Ghost Amateur Radio Club entertained almost 700 Scouts with radio activities and activated the special callsign VI2AJ2010 during the Jamboree. The report starts on page 31.

Contributions to Amateur Radio
Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

Back Issues
Back issues are available directly from the WIA National Office (until stocks are exhausted), at $8.00 each (including postage within Australia) to members.

Photostat copies
If back issues are unavailable, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's oldest National Radio Society, founded 1910.

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Member of the International Amateur Radio Union

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Editorial

Peter Freeman VK3PF

Scouts and amateur radio

Many licensed amateurs will have had exposure to our hobby – amateur radio – through an association with the Scout (or Guide) movement. Some will have been exposed to amateur radio when a Scout or Guide group participated in Jamboree On The Air (JOTA). Others may have had the pleasure while attending a Jamboree and been exposed to an amateur radio station whilst there.

As a Scout, many years ago, I had the pleasure of attending a Jamboree in the then outskirts of Sydney. Thinking of the event raises many memories, but none involved radio.

Why should we all be interested in the Scout and Guide movements? It should be clear to all readers – any involvement with a group of young people is an opportunity to demonstrate aspects of the variety of experiences that OUR hobby can present. I fully acknowledge that only a small proportion of those exposed may have a flame of interest ignited, but any such flame may lead to a new amateur operator in the future.

As part of my personal experiences and development as a Scout, I was never directly exposed to amateur radio. If I had been so exposed, perhaps I may have become an amateur earlier in my life or perhaps I may have been turned away, as my mind may not have been ready for this hobby.

In this issue we have a report of the radio activities offered by the Fishers Ghost Amateur Radio Club at the national Jamboree in January this year (AJ2010). Yes, perhaps this report is now "old hat", but it arrived just after the April edition had gone to print.

This raises a couple of issues for readers who have a newsworthy item to report. Clearly, you should submit a report as soon as possible after the event and you must consider our deadlines. Any report received after the end of the first week in a month will be delayed by at least a month.

A World Jamboree typically occurs every four years. The AJ2010 event was an Australian national event and in 2011, the 22nd World Scout Jamboree will gather in Sweden. So there are other opportunities available to a Scout to participate.

JOTA/JOTI

We do have an annual opportunity to showcase our hobby to Scouts and Guides: Jamboree On The Air (JOTA) and Jamboree On The Internet (JOTI), usually held on the third weekend of October each year. So, every year, we can expose members of two significant youth movements to OUR hobby, amateur radio. An individual amateur can be involved, but JOTA/JOTI is better suited to a group or a club to operate a station. Get involved in JOTA/JOTI and explore what might be possible.

Contact your local Scout or Guide group and offer your services, NOW. Be Prepared (Scouts, past and present: excuse the pun!) – involvement could range from setting up a portable station at a remote campsite without power, setting up at the local Scout or Guide hall, or even arranging for the Scouts or Guides to visit the local Club (or individual amateur) shack to listen and make some contacts with other JOTA/JOTI participants just down the road or on the other side of the world.

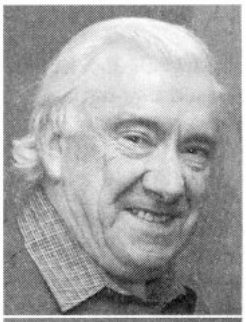
So why an entire Editorial discussing amateur radio and Scouts/Guides? If you do not get organised very soon, you will NOT be able to participate and local youngsters will miss out.

In these times, there are a myriad of forms to be completed and approvals gained! Start early, plan ahead and all involved will have an enjoyable weekend "playing radio" in October, with a group of young people, even if they are initially reluctant to pick up the microphone and to press the PTT button!

Enough on youngsters! I look forward to catching up with readers who attend the Centenary AGM in Canberra at the end of the month. Check out the details of the event in this edition, or on the WIA website.

Cheers, Peter VK3PF **ar**

WIAcomment



Michael Owen
VK3KI

Publicity, the Media and amateur radio

At the end of this month the WIA will be holding its Annual General Meeting in Canberra.

The AGM and Open Forum are now features of our year, not because the formal statutory meeting has suddenly become really interesting, but because the Open Forum gives everyone the chance to talk about whatever they want to, and because we have met in a place and with a theme very different from the year before, providing an interesting environment to participate directly in the WIA.

This year, though, is very special. We celebrate 100 years of organised amateur radio. We do so in Canberra, the national capital. We focus on history; with Saturday afternoon full of fascinating presentations.

As I write this there are eight weeks to go. Yet over 100 people have already registered, so I urge you (if you have not already done so) to register to participate in a memorable weekend. The easy online registration is on the WIA website.

Also, in May, the WIA will be able to use the special callsign VK100WIA, and then in three day blocks, the affiliated clubs who have registered to use the callsign will be able to use it from the start of June until the end of October.

As reported elsewhere in this issue, the clubs using the callsign are being sent a 'Media Kit' to assist them in getting publicity for the amateur radio, their club and the WIA. Of course, a club conducting an activity not involving the callsign is more than welcome to request the 'Kit'.

But why do we suggest that amateur radio needs to promote itself?

There may be a number of reasons.

One is that we need to continue the trend of an increasing number of amateurs. If, as was the case until recently, the number of amateurs is steadily decreasing, those who covet the spectrum currently allocated to the Amateur Service have an argument based on that alone.

As we have said before, the initial rush after the introduction of the Foundation licence has gone and now we need to find ways of encouraging new people to become interested.

Then, many clubs would like more members, and new amateurs trained and assessed by a club often represent new members for that club.

And the WIA would like new members, too.

We are suggesting that the centenary can provide a focus for a "story". Talking about how it all started and how much has changed in 100 years is a good way of leading into the story of what amateur radio is and what it does for a community.

Do not forget that the provision of emergency communications will be seen as interesting by many.

But amateur radio also provides scientific learning, which may be very important for young people before they make career choices.

But it is also an interest, a hobby. Amateur radio is many different things to different people. And we get enjoyment from whatever aspect we choose, whether it is talking to other people with the common interest, investigating technical issues, taking part in contests or seeking awards, competing in direction finding contests or in any of the many aspects of amateur radio.

I have continually talked of promoting amateur radio in a local community. It is often easier to get a local story into a local newspaper or radio station, or even a regional television station than it is in the vast cities like Sydney and Melbourne.

So, what may be interesting to the radio presenter or the journalist or indeed the public may be different things in different places, no doubt at different times.

I do not suggest that all clubs will want to seek publicity, and I would not suggest that all clubs want to train and assess new amateurs. I understand that some clubs were formed to meet a particular interest.

I also know that many clubs are more general in their interests and anxious to attract, train and assess new amateurs and find new members.

I have looked at what the clubs have put under the heading of "Other Activities" and "Publicity" on the VK100WIA Roster.

Some are still working on it, registering "TBA" or the like. Hopefully the 'Kit' will encourage them to think of good ideas.

Others are engaging in usual activities but this year opening the activity to the public. Some of us are much better than others at walking up to a stranger and just talking about amateur radio. But who does what is part of the planning.

If you have a successful activity, share it with everyone. A news item for the WIA website, perhaps with a photo, is a very good way of sharing what you have done with others.

And sending us press clippings or notes of items on radio or television really does encourage everyone and also may give others ideas.

Suggestions on improving the 'Media Kit' are also welcome.

So, may I urge everyone in this important year to think about how amateur radio, your club or the WIA can be promoted in your community?

Do not think that talking of history is an indifferent way of attracting new amateurs and new members. It may be just the right starting point to move to the aspects of today's amateur radio that will attract interest.

ar

WIAnews

Publicity support for Clubs

The 21 clubs rostered to use the special callsign VK100WIA in June and July have received a comprehensive package of material to help them promote amateur radio, their club and the WIA Centenary.

The material is ideal for any club that wants to promote an event or activity and gain positive media publicity for amateur radio.

While clubs on the VK100WIA roster will automatically receive this material about eight weeks prior to their three-day rostered slot, any other WIA affiliated club can request a copy from the WIA National Office.

In a covering letter the WIA President Michael Owen VK3KI explains that the resources being provided include media liaison advice, a template media release, background sheets and guides.

Clubs using this package will easily be able to create a 'Media Kit' to send to their local news media.

Michael VK3KI said a number of clubs had asked him and other WIA directors at hamfests and meetings for this kind of support. "We now look forward to seeing the results of club media campaigns."

Clubs supporting the Centenary

The WIA Centenary Committee has added new activities to the celebration program for the Centenary of Organised Amateur Radio in Australia. Three new events are now *WIA Supported Centenary Activities*.

These will play a role in promoting amateur radio, encouraging more people to consider becoming a radio amateur and highlighting the historical occasion of the Centenary.

The Gippsland Gate Radio & Electronics Club (GGREC) south-east of Melbourne in association with the Koo-Wee-Rup Historical Society, will from 16 to 18 June re-enact the first exchange of wireless press messages between the United Kingdom and Australia in 1921.

GGREC President Chris Chapman VK3QB says that this event, in addition to promoting amateur radio, will recognise the contribution that the local community made to these early days of pioneering and advancement of our country delivered by wireless telegraphy.

Another event is the 35th annual Oxley Region Amateur Radio Club Field Day at Port Macquarie New South Wales 12-13 June. Club President Henry Lundell VK2ZHE also advises that this is the club's 40th anniversary year.

The third event is the RadioActive Amateur Radio Award for Scouts being held during the entire month of July. This will promote amateur radio and the Centenary.

There has been strong growth in the number of Scouts and Scout leaders who are radio amateurs since restructure of the licence system occurred five years ago.

Scouts Australia JOTA-JOTI Coordinator and WIA Director Bob Bristow VK6POP said it is recognised the WIA played a key enabling role to deliver the new era of amateur radio including the Foundation Licence.

In appreciation, the radio amateur Scouts will support the WIA Centenary with an on air activity promoting the significance of this important milestone throughout the Scout movement.

Bob VK6POP said for the month of July, Scouts will get on air to make contact with as many other Scouts as possible and also seek QSOs with the special callsign VK100WIA.

While also having fun and honing their operating skills, they can also qualify for the RadioActive Amateur Radio Award for Scouts.

WIA Centenary ARISS contact

Students from Canberra's Trinity Christian School are to talk to an astronaut on the International Space Station during an ISS contact to take place during the WIA Centenary dinner in Canberra this month.

School Principal Carl Palmer VK1TP/VK2TP is very pleased that ten students will be given such an honour to attend the WIA Centenary dinner and talk with the astronaut.

The school at Wanniassa, in the beautiful Tuggeranong Valley at the southern end of the ACT, will celebrate its 30th anniversary next month, adding to what will indeed be a very special occasion.

Australian ARISS Coordinator Tony Hutchison VK5ZAI is finalising arrangements for the contact between the International Space Station NA1SS, and the WIA special callsign VK100WIA, on Saturday 29 May during the WIA Centenary dinner.

Special Event for ANZAC Day

Many Australian and New Zealand radio amateurs will have operated on ANZAC Day – Sunday April 25 – as an amateur radio salute to the servicemen and women in many conflicts. CW - Morse code - was used as a means of communication during WW2, Korea, Malaysia and even early Vietnam. Museum ships, including the HMAS Whyalla, will be utilised to honour this event.

Meeting of the Macedon Ranges Amateur Radio Club

The Macedon Ranges Amateur Radio Club (MRARC) VK3RA recently made a solid launch as Victoria's newest amateur radio club. The first meeting was held on March 20 with 22 new members getting behind the club.

An executive of Peter Willmott VK3TQ as president, Graeme McDiarmid VK3NE as secretary and Peter Wolfenden VK3RV as treasurer were elected. A committee of Richard Hoskin VK3JFK, Gary Greer VK3GSG, Colin Smith VK3YWY and Derek Tomlinson VK3NQ were also elected.

MRARC has affiliated with the WIA, and welcomes all radio amateurs and those who would like to get involved in the hobby to come along.

The club has also launched its new website http://www.mrarc.org

ar

Making your leads and connectors a little more professional looking

Ben Broadbent VK5BB

Have you ever made up leads with connectors on the ends and then thought that it was missing that something? Maybe you have looked at that home brew lead you have just made up and compared it with a commercial lead and thought, 'I wish I could have a nice looking strain relief similar to that one!'

Well you can with a little ingenuity. Have you seen those professional looking RG58 coax leads that have strain relief boots on the cable butted up against the connector? You can buy a version of those boots quite readily and they are just the right size for fitting to many connectors other than RG58 crimp connectors.

One supplier calls the component, 'Crimp plug boot' (Jaycar part number PM-0648). They can be found at several other sources.

I have been using these boots for many years. They make my home brew cables look really neat and professional looking, with the benefit of the strain relief function as well.

Back in the late 1980s, when I got involved with packet radio, I had to make my own leads to go between the TNC and computer. Here DB 9 and DB 25 connectors were used and I did not like the method that is provided with the connector shells for securing the cable.

When using the provided cable clamps and fitted to the shell and the shell halves screwed together, the cable was still loose, even though it was secure and would not pull out or break the wires off the soldered pins. Also where the cable exited the rear of the connector shell, there was an unsightly gap around the cable.

Now I had a collection of these boots in my box of bits for making up coax leads and the box just happened to be out and in view. While I was making up a lead, it occurred to me that the boot could be fitted into the rear of the DB 25 shell; the groove of the boot would nicely fit the cable exit thus securing the boot when the shell halves were screwed together.

To secure the cable inside of the boot, I just used a small cable zip tie and when pulled back into the boot, it had enough bulk to prevent itself from being pulled through.

For the smaller DB 9 shell, I had to shorten the boot by cutting it several ridges back from the larger end. When the shell halves were screwed together, the boot was nicely clamped. Using the cable zip tie secured the cable inside of the shell.

You can also use these boots for cable grommets through the walls of your project boxes, that is, 'Jiffy box'. Just drill a hole where you want the cable to exit. The hole size should be a bit smaller than the last groove at the larger end of the boot. You just then need to work the boot through the hole, from the inside of the box,

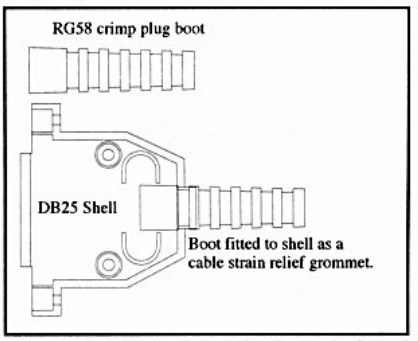


Figure 1: Shows how the boot is fitted to the shell as a cable strain relief grommet.

fit and secure the cable using a cable zip tie on the inside of the box. I find that if you pull the cable back a bit so the zip tie pulls just inside of the boot, it makes a very secure clamp and the cable will not pull out.

The drawings and photos should give you a good idea of the concept and the rest is up to your imagination and ingenuity.

Have fun. **ar**

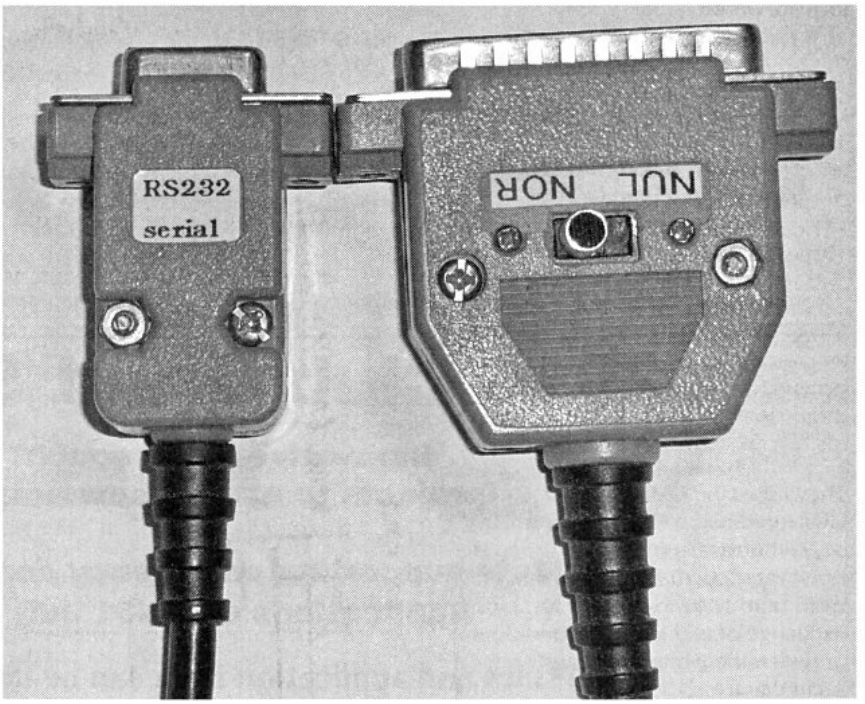


Photo 1: The completed connectors, with their professional look.

The Wireless Institute of Australia ACN 004 920 745

Advisory Committees — Call for Nominations

Pursuant to clause 18.12 (e) of the Constitution the WIA Board has made Regulations providing for an Advisory Committee for each State of the Commonwealth, the Australian Capital Territory and the Northern Territory, each comprised of three elected members (the Members) and one member appointed by the Board (the Nominated Member). The full Advisory Committee Regulations may be found on the WIA website http://www.wia.org.au/

The function of each Advisory Committee is defined in the Regulations as follows:

(a) To provide advice and information to the Board or to any person authorised by the Board to seek advice or information in relation to any matter identified by the Board or by a person so authorised;

(b) To promote amateur radio, the WIA and membership of the WIA by means including but not limited to:

(i) Maintaining such stock of forms, brochures and other material as is determined from time to time by the Board and in such numbers and subject to such procedures as the Board shall define from time to time;

(ii) Establishing and manning or causing to be manned stands and stalls at appropriate gatherings of radio amateurs or at functions or events promoting amateur radio generally;

(iii) Promoting and selling and causing to be promoted and sold WIA membership, WIA books and products at stands and stalls and otherwise;

(c) Making available and encouraging others to make available local news for WIA broadcasts and releases;

(d) Liaising with affiliated clubs as requested by the Board and at the request of and for the Board arrange and organise conferences of affiliated clubs from such part of such Areas as are identified by the Board, and

(e) Undertake such other tasks and functions as are agreed from time to time.

The term of the present elected members of the Advisory Committees ends on 1 October 2010.

Nominations are called for from WIA Members seeking election as a Member of an Advisory Committee with a term of three years commencing 1 October 2010. A Member of an Advisory Committee must be a voting member of the WIA, must reside in the Area of the Advisory Committee and must hold an Australian amateur radio licence. A retiring member of an Advisory Committee is eligible for re-election.

Any person wishing to nominate as a candidate for election as Member of an Advisory Committee of the WIA must deliver or cause to be delivered to the Returning Officer by not later than 22nd June 2010:.

A statement signed by the candidate signifying his or her willingness to be a candidate for election as a Member of an Advisory Committee, (stating which), and signifying his or her willingness to perform and carry out the functions identified above together with

- the name and age;
- the full residential address;
- the occupation;
- the callsign of the candidate, and
- such other biographical details or other information as the candidate wishes to accompany the ballot papers, but in all not exceeding 250 words.

Delivery to the Returning Officer may be made by hand when the WIA national office is open at,

Unit 20, 11-13 Havelock Road, Bayswater, Victoria 3153

Or, by mail to,

P0 Box 2042, Bayswater Victoria 3153

Nominations received by facsimile or by other electronic means cannot be accepted.

If there are insufficient nominations for Member of an Advisory Committee, the Returning Officer must declare the persons nominated to be elected unopposed and the Board, following the declaration of the result of the election must make appointments to fill any position for which there were insufficient nominations.

Chris Chapman VK3QB

2010 Club Grant Scheme

Innovative ideas sought for projects to attract new amateurs

and

projects supporting emergency communications

Applications close 31 July 2010

The rules and application form can be downloaded from http://www.wia.org.au/members/affiliation/about/

Part 4
Regulation, Communication, Federation
An arena of wonder

Peter Wolfenden VK3RV

The history of amateur radio in Australia continues. Chapters one to eight of this series have been published in previous issues of *Amateur Radio* magazine.

9 New Regulations!

The Wireless Weekly of 4 August 1922 reported:

"A statement of the utmost importance to experimenters was made by Mr. Hughes in the House of Representatives on July 28th according to the Melbourne Correspondent of the Evening News.

The Prime Minister stated that facilities granted in other parts of the world would be given to amateurs here under proper control. No restrictions, other than those to prevent interference, would be imposed.

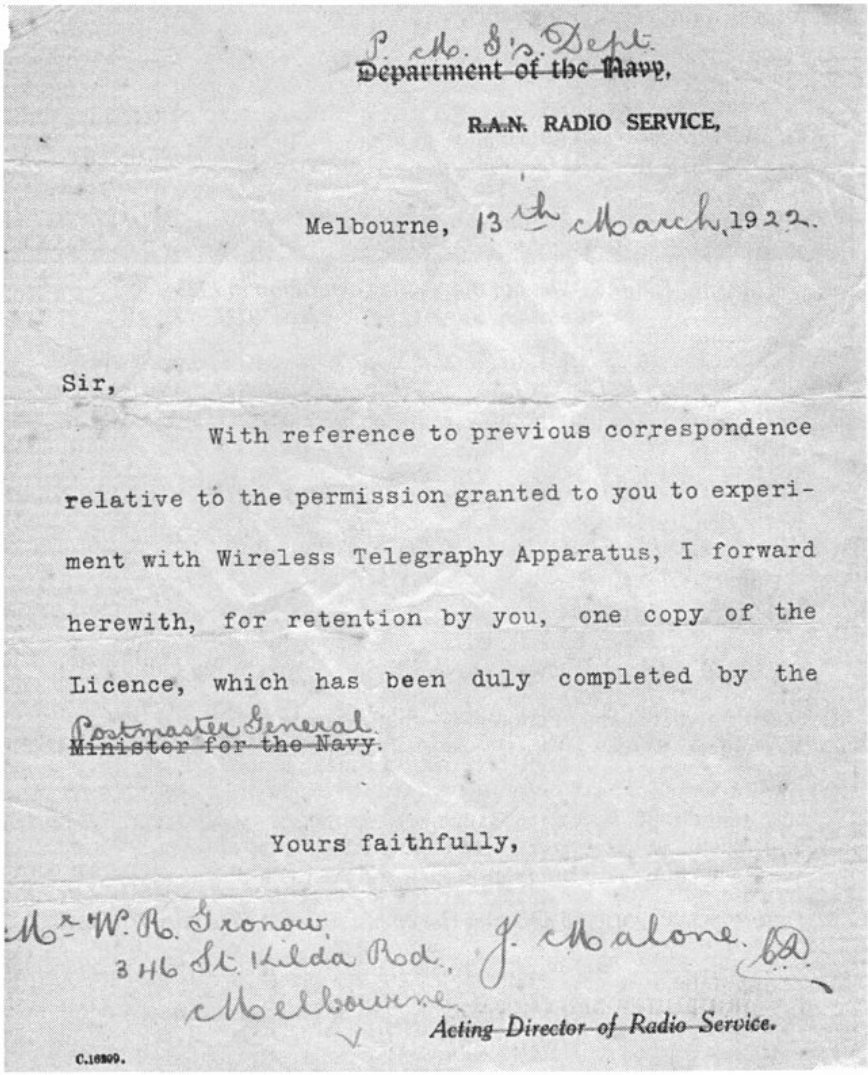
He would see that the wireless company did not interfere in the enforcing of the laws, but that control was by disinterested Government officials.*

This must be considered one of the best bits of news concerning their hobby that the experimenters have ever heard; and coming as it does, on top of the intimation that licence fees may be reduced, makes their outlook very much brighter.

The amateur will look to Mr. Hughes to keep his promise to the letter."

* Commercial Stations – in particular AWA, partly owned by the Australian Government – were often referred to as The Wireless Company.

Prime Minister Hughes was regarded as a good friend of the amateur experimenters. It also is interesting to note that a Wm. Hughes, Jn., of Rozelle, was shown as holding call sign XFX in the 1914 Call Book (1).



P. M. G's Dept.
~~Department of the Navy.~~

R.A.N. RADIO SERVICE,

Melbourne, 13th March, 1922.

Sir,

With reference to previous correspondence relative to the permission granted to you to experiment with Wireless Telegraphy Apparatus, I forward herewith, for retention by you, one copy of the Licence, which has been duly completed by the ~~Minister for the Navy.~~ Postmaster General.

Yours faithfully,

Mr W. R. Gronow
3 HG St Kilda Rd.
Melbourne

J. Malone
Acting ~~Director of Radio Service.~~

C.16899.

Figure 1: A letter received by Bill Gronow 3WG advising him of his licence. Note the manual changes to the letter-head and responsible officer. The PMG's Department administered the radio spectrum following a long drawn out process in which the Navy attempted to retain control. (WIAA).

The annual dinner of the Victorian Division in October produced further interesting input from some of the guests.

Jim Malone, Wireless Controller for the Commonwealth stated:

"that new regulations had been prepared, but as they had not as yet been approved, their contents could not be made public" and "the institute could do a great deal of help to the Government to 'police the ether'. He suggested that amateurs should appoint one of their number

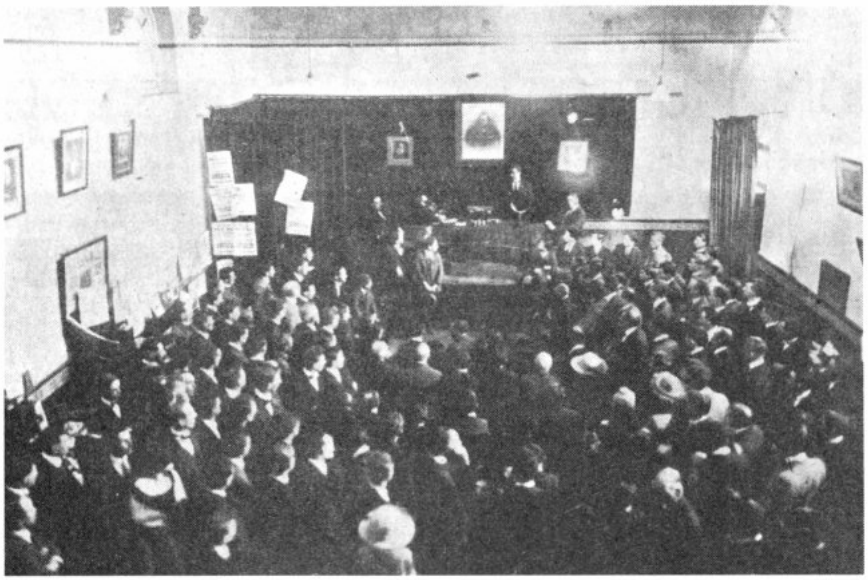


Figure 2: View of the Sydney exhibition in 1923 (Australasian Wireless Review Jan. 1923).

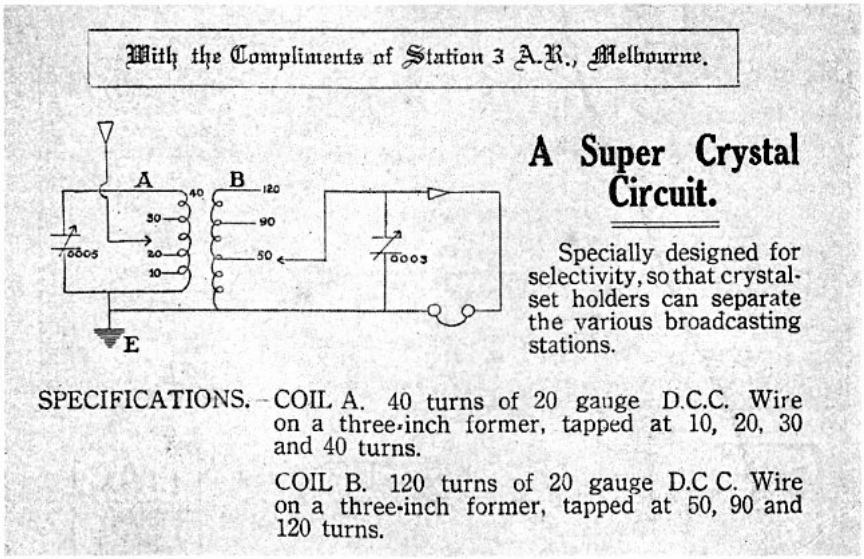


Figure 3: 3AR QSL card showing the circuit diagram for a crystal receiver.

Figure 4: The cover of a brochure issued by 6WF (WIAA).

to act as an honorary radio inspector."

Colonel Williams representing the army signalling corps said: "... that he looked to the institute to provide operators in any future wars in which the Empire might be involved. Wireless would be the most important method of signalling in the next war".

Another guest was Commander Creswell who represented the Navy which was in the process of losing its strangle-hold on the spectrum (2).

The Government duly released the new regulations which were published in radio magazines in December 1922 (3).

Activity in the experimenter's allocation continuously increased during 1922/3 when reception of 'phone' or voice transmissions generated much public interest. In September 1922, the Sydney Metropolitan Radio Club organised Australia's first Radio Exhibition where the President, R.C. Marsden, demonstrated telephony reception.

Various forms of "un-official" broadcasting by experimenters, including "Radio Dances", entranced the public and many of those involved in the transmissions were destined to play important roles in "professional broadcasting".

During this time, because of the increased interest in wireless – particularly telephony – many distinguished people of high standing including those from education, industry and the "commercial" side of wireless were admitted to membership of the Institute (4).

Experimenters were destined to be largely relieved of their popular "broadcasting" activities by late 1923, as the commercial world was set to take control of most of that part of the spectrum and of course, through it, a new source of revenue.

History tells us that the initial foray into broadcasting using "sealed sets" was doomed, brought on largely by the fact that by mid 1924 there were only 1400 receiving licences issued for all of Australia! (5) Consequently, further major changes were at hand in the form of Class A and B "open" broadcasting stations, a decision which almost immediately increased

the number of licensed receivers by a factor of ten! (6)

Experimenters however, were about to experience another exciting time and arguably one of their greatest moments: the great "DX explosion" of 1923/24. This was the time when the world shrank for those experimenting with short waves. 1 May 1923 saw the commencement of the "Trans Pacific Tests", organised locally by the WIA and in America by the ARRL. It was an attempt to receive wireless telegraphy from America which initially bore limited results, but by 17 May many American stations were heard in Australia. Newspapers closely followed the advances of the amateur experimenters led here by HK Love and RA Hull.

The Melbourne Argus of 19th of June 1923 reported:

"AMATEUR WIRELESS TESTS, MESSAGE FROM AMERICA,

Wonderful Results. ... Mr. M. Howden of Box Hill, has been by far the most successful of the Melbourne Experimenters, having heard no fewer than 22 of the 23 calls recorded in Melbourne. Messrs. R. Hull and C. Hiam, of St. Kilda were next with six calls and Mr. H. K. Love third with four calls...only three stations are reported as being heard in Sydney."

At a Victorian Division meeting held


Wireless Institute of Australia
VICTORIAN DIVISION
SOUVENIR PROGRAM
FIRST
Wireless and Electrical
EXHIBITION AND
CONVENTION
MELBOURNE TOWN HALL
May 14th to 19th, 1924
PRICE SIXPENCE

Figure 6: Cover of the 1924 WIA Exhibition Program.

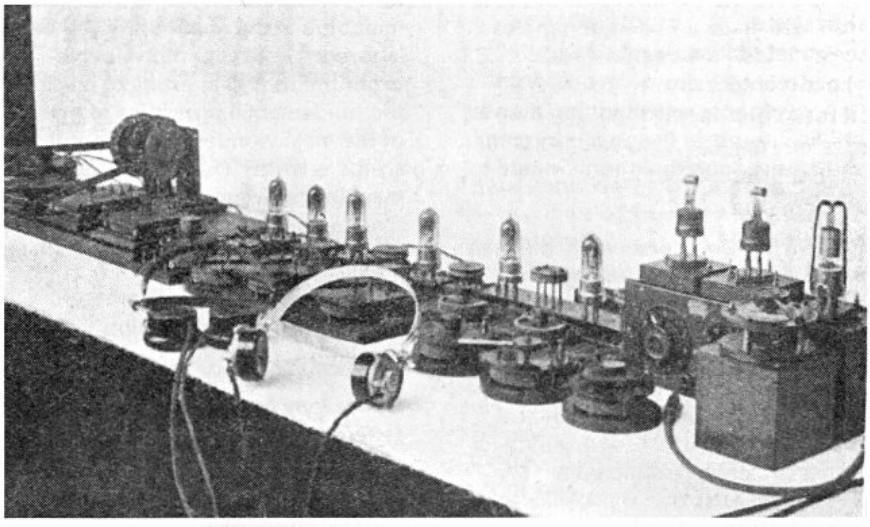


Figure 5: A receiver for the proposed Trans-Pacific tests made by Ross Hull 3JU and Charlie Hiam 3LW, using 6 RF valves – with an additional five proposed! (Australasian Wireless Review, April 1923, p43. WIAA)


A Monthly Journal
JUNE 15, 1924
THE RADIO EXPERIMENTER
Official Organ of the Wireless Institute of Australia
PRICE 1/-
NEW-SYSTEM WIRELESS
RADIO, REFINED AND SIMPLIFIED
T.M.C TRUE MUSIC
ADD to Your Wireless Pleasures,
SUBSTRACT from Your Radio Difficulties,
MULTIPLY Your Reception Satisfactions,
DIVIDE Your Experimental Disappointments.
This can be done by no surer means than by using New System "TrueMusiC" Wireless Equipment.
The Recognised Best---
New System TrueMusiC Wireless is assuredly the New Star in the Radio World. With equipment of this All-British quality, you can command the best the Broadcasting Stations far and near have to give.
New thrills, New surprises, Remarkable clearness, Astonishing distinctness; all will be yours when you have selected your Receiving Set and Accessories from the list of genuine English Products here and now procurable.
Call at any Radio Establishment dealing in New System Wireless Apparatus, or write direct to us.
New System TrueMusiC 3-Valve Receiving Set
The model illustrated is of highly efficient reception ability. It is of good appearance, and has a distinctive feature in the Loud-Speaker which is built in the receiver cabinet.
The instruments are mounted upon a panel of highest quality tested ebonite.
A special Terminal is provided for another Loud-Speaker, which can be used simultaneously in another room, if desired.
Listening-in with Headphones is also possible.
All-British Manufacture, pre-war standard throughout.
Price £38-0-0. (Not including Headphone) Carriage Extra
HEADPHONES, LOUD-SPEAKERS, and all Accessories—All British make. Moderate Prices.
T.M.C TRUE MUSIC
New System Telephones
PTY. LTD.
280 Castlereagh Street, SYDNEY. Tel. M. 3230
25-27 QUEEN'S BRIDGE ST., SOUTH MELBOURNE. Tels. Cent. 11130 and 1701
NEW-SYSTEM WIRELESS

Figure 7: The cover of the Radio Experimenter, the official organ of the WIA.

a few days later, a full report of the tests was made and donated prizes were divided between the four experimenters above. The diversity of prize donors reflected the intense public interest in the amateurs using short-waves and their home-made stations:

P. H. McElroy of Homecrafts, the man who called the first meeting which established the Amateur Wireless Society of Victoria in 1911, was one donor. Another was Oliver J. Nilsen and Co., Electrical Engineers, about to become operators of 3UZ, Melbourne's first "B Class" station. Other prizes were donated by: The Argus, The Australasian, Wireless Weekly and Sea, Land and Air (7). The spoils of those few frantic weeks of activity spurred on amateurs and boosted their standing within the general community to the extent that photographs and reports of their stations were published in the daily press! (8)

Consequently, even greater administrative issues were at hand including the need for international planning of spectrum and call signs. No longer were experimenters "playing in their own back-yard". Now they had to really think "globally" – although full international wireless regulation did not begin until after the International Telecommunications Union's Washington Conference in 1927. Needless to say, the experimenter's ranks continued to expand steadily (9).

11 A Federation of Divisions

And so in May 1924, a meeting took place at the Melbourne Town Hall. This was held in conjunction with a Wireless Exhibition organised by the Victorian Division of the W.I.A. The Souvenir Program for the Exhibition contained not only the many advertisements from stall holders, but it also details the history of experimenters and the W.I.A. itself.

The opening page summed up the situation at that time:

"It will come as a surprise to many people to learn that the Wireless Institute of Australia is a very old established organisation, and was formed in 1910. It will be equally new to them to learn that for nearly ten years before this time individual members of the community had been laboriously carrying out valuable experiments and assisting to disclose the fundamental principles of one of the most wonderful and useful sciences which have been offered to mankind..."

All well within living memory of many involved with it!

And under "The Convention" heading:

"It has long been realised that the Federation of the various branches of the Institute and the formation of a Federal Executive would be a very desirable accomplishment and a big step forward for the experimental movement in Australia, but until now, one thing or another has always prevented a closer affiliation of the various State executives than has so far existed. The convention to be held on Friday, however, promises an opportunity for the various States to meet on common ground and lay the foundation of an all-Australian organisation and to the Victorian Division goes the privilege of being the convener of the gathering." (10)

The exhibition was considered "a splendid success with attendances exceeding all expectations." The convention's aim "was the federation of the several divisions into a compact body, the Wireless Institute of AUSTRALIA, not only in name, as heretofore, but in fact" (11).

New South Wales, Victoria and Tasmania sent representatives and Queensland, South Australia and Western Australia relied on proxies supplied by Victoria. A number of well known early experimenters were among the delegates including Phil. Renshaw from Sydney, Howard Kingsley Love, Max Howden and Ross Hull from Melbourne. Ross Hull later moved to Sydney where he was chairman of the WIA Delegates Council (Clubs) during the mid 1920s.

Mr. Love was elected chairman who, on opening the meeting said: "there were several endeavours to achieve Federation of the Institute without success. It was hoped that all previous difficulties had been overcome and that it was possible to form a permanent organisation for general good."

Mr Renshaw (NSW) stated "that the New South Wales Division of the Institute was prepared to cooperate in any movement which could make the wireless experimenter of service to the public and to the Government."

Delegates from other States indicated that they had been directed to support the principle of federation.

It is appropriate to quote one paragraph from the published report of the convention:

Figure 8: Two pages from the 1924 Exhibition Program, showing advertisements placed by 3AR. "Sealed sets" were still a reality at the time of the WIA Exhibition! (WIAA)

"...At this junction the Controller of Wireless, (Mr. J. Malone), and a member of the Queensland Institute of Radio Engineers joined the meeting. Mr. Malone congratulated the various branches of the Institute on their decision to federate, and stated that such an action had been desired for a considerable time by the Postmaster General.

He added that in administrating the regulations for the control of experimental activities the department desired to accede to the general wishes of experimenters as far as practicable, and to be guided by the experience of those who were working under the regulations. Suggestions for improvements in experimental conditions would be welcomed by the department,

Q.R.Z.
Something of a "Tone" Poem.
By Toc H.

Who is this bird signed QRZ?
Who never seems to go to bed,
But wears the fones all night instead.
Perhaps the blighter's current fed?

Who is this guy, that having writ
Sarcasm, every word of it,
Thinks that his gags contain some wit?
No ham! for such 'twould seem unfit.

What kind of egg can this cove be?
Who never seems; at least to me,
To credit decent PDC,
Or knows what's meant by RAC?

What type of insect dares to write
Thin veiled contempt in black and white,
Behind a pen-name sitting tight,
Afraid, 'twould seem, to face the light?

Come forth, my friend, let hamdom see
The sort of Gargoyle you may be,
And if your fist can thump a key,
I'd like to QSO with thee.

—VK2TH.

Figure 10: QRZ – a poem by VK2TH (From Amateur Radio magazine, August 1934, p.28).

Some explanation of what, to some, may be unfamiliar terms as abbreviations were used to speed up telegraphic (Morse) communications.

QRZ: Who is calling me?
PDC: Pure Direct Current – an indication that the received signal sounds clear and has a clean tone.
RAC: Raw Alternating Current – the signal has a rough or harsh tone - of a "blurting" nature.
Key: A Morse code signalling key.
QSO: Generally used to mean a communication with another station.

and would receive sympathetic consideration..." (11).

Other items on the agenda included:

1. Proxies
2. Official Organ [Magazine]
3. Operation of experimental stations and use of experimental wave band.
4. Silent Night [Listening only].
5. Regeneration.
6. Honorary Radio Inspectors.
7. Institute finances, liabilities and contributions.
8. General consideration of co-ordination.
   - Aims and objects of the Institute.
   - Policy re membership.
   - Obligations to stand together.
9. Grading of experimenters.

These items were discussed during the two days of the convention and are reported in some detail in The Radio Experimenter which became the official organ of the Federal Council at the convention.

It is interesting to read the report and to attempt to understand some

Figure 9: Amateurs also shared the broadcast band. They frequently sent photographs of their equipment with QSL cards. This one was sent to VK3HK from ZL3BQ and it shows the turntable and home-made condenser microphone used at ZL3BQ's "broadcast" facility c1930 (WIAA).

of the pressing issues at that time, such as the convention agreeing to recommend to the Postmaster General that the Honorary Radio Inspectors scheme be discontinued. This was mainly because of the workload, due to the rapid increase in the number of receiving sets (and their radiating problems) getting beyond the few inspectors available in each State! (11)

The meeting "set the stage" for many subsequent actions and may well have been a catalyst for the formalising of the Institution of Radio Engineers. According to Murray Tyler in his IREE Monitor article of December 1982, ET Fisk could have been influenced by the news of the apparently unregistered Queensland Institute of Radio Engineers surfacing at that first National Convention. Within three months Fisk had affected the registration of IRE Australia (12).

Later in 1924, the general public also had "a win" when the government introduced a more logical approach to broadcast management which included:

"..... the right to receive any broadcast programme..... and the use of any design of set..." (13).

Some unethical strangle holds had at last been broken!

As mentioned, by mid 1924 there were only 1400 receiving licences for all of Australia! Eight broadcasting stations were operating by March 1925. On long-wave, 1000 to 2000 m, "A" Class stations: 2FC, 3LO and 6WF, (however 3LO had commenced negotiations to lower their wavelength).

The 300 to 500 m band contained "A" class stations: 2BL, 3AR, 5CL and 7ZL. The first "B" class station to operate was 2UE Sydney in January 1925, followed in February by 3UZ Melbourne on 350 m. The re-organisation of broadcasting brought about an immediate increase in receiving licences to about 13,200 – obviously more acceptable to the public than the monopolistic "sealed sets scheme".

There were still many "pirate listeners" whose "star" aerials (those which came out at night) could be observed by neighbours. Wireless Inspectors were unable to make nocturnal visits! (14)

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(3) Radio Laws for the Amateur, Wireless Weekly Magazine, December 1st 1922, p4.

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(6) Editorial, Popular Wireless Weekly Magazine, Melbourne, March 11th, 1925, p5.

(7) Proposed Amateur Relaying League, Argus Newspaper, Melbourne, June 20th 1923, p14.

(8) Remarkable Wireless Achievement, Argus Newspaper, Melbourne, June 22nd 1923.

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(10) Souvenir Program, Wireless and Electrical Exhibition and Convention, Melbourne Town Hall, May 14th to 19th, 1924, Wireless Institute of Australia, Victorian Division. 1924, WIA Archive.

(11) Minutes of first Australian Convention, Radio Experimenter and Broadcaster Magazine, (Editor H.K. Love A3BM, Assoc. Editor R.A. Hull A3JU), Melbourne, June 15th 1924, p15.

(12) Tyler, HM, The beginning of IREE – How it all came about, Amateur Radio, WIA, January 1.

(13) Hodder, I, VK3RH, File, Letter from PMG to amateurs (dated 23 September 1924), WIA Archives.

(14) Editorial, Popular Wireless Weekly magazine, Melbourne, March 11th, 1925, p5.

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Figure 11: 5BR Discordians. 5BR was a popular amateur broadcaster – the Blackwood Radio Club, now the Adelaide Hills Amateur Radio Society. This sketch is from about 1927. Courtesy of Lloyd Butler VK5BR and the Adelaide Hills Amateur Radio Society. From AR magazine March 1991, p. 24.

Amateur or Professional?

Blair Bowler VK4BBX

The word amateur is derived from the Latin word amator, which means lover, devoted friend, or someone who is in pursuit of an objective. In the original sense, an amateur is someone who does something for the love of it. Amateurs do what they do because they have a passion for it, not because it pays the bills.

But the word amateur often implies something else about quality and expertise. People often think of amateurs as second-rate to those who perform at a professional level. Professionals are simply those people who earn their living in that field, while amateurs do not. There are others happily employed in the industry which is an extension of their amateur interests. However, from the sporting arena to the humble workbench, amateurs throughout the world continue to rewrite history.

For example, Arthur C. Clarke (1917-2008) was an amateur scientist. He remains one of the most celebrated science-fiction writers in the world.

But, he once acknowledged that the most important piece he ever wrote was a short technical article while he was serving as an Officer in the radar division of the Royal Air Force. Born and raised on a farm near Taunton in south western England, Clarke only gained a high school diploma. But in the RAF, he was given the opportunity to work with scientists who were doing cutting-edge work which would ultimately prove crucial to the allied victory in World War II.

Although he published some short science fiction stories in 1945, his article: Extra - Terrestrial Relays, published by Wireless World in October of that year, was a different matter. He proposed the idea of communication satellites orbiting the Earth to transmit television around the world. The few scientists who read Clarke's article largely dismissed his idea as science fiction. But his technical explanation of how such satellites would work were solid. He correctly calculated the orbit in which they should be placed in order to gain maximum coverage of the globe. His theory became a reality in April 1965, with the launching of the Intelstat 1, the first commercial geostationary communication satellite, marking the true beginning of satellite television.

This geostationary orbit, lying directly above the equator, would become known as the Clarke Orbit in honour of the young visionary who first proposed the theory. Clarke won numerous awards for his science-fiction novels and stories. However, his greatest honours, including a special Emmy award in 1981, and NASA's distinguished Public Service Medal in 1995, all applaud the revolutionary idea he conceived in 1945, as an amateur scientist.

Amateurs from all fields of endeavour have risen to fame. They perform at a professional level in the field they love. They simply choose not to make it their way of living. They are, by definition, amateurs. But, nothing about their skill is amateurish.

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The WIA Centenary Committee Call for Articles

The WIA Centenary Committee wishes to acknowledge receipt of further historical material forwarded by members and others. This month, the Committee wishes to thank the following:

- From Ian VK2ZIO, who operates the Kurrajong Radio Museum, NSW, audio recordings of Joe Reid VK2JR and Ray Carter VK2HC. Ian also forwarded a CD ROM containing lists of early callsign including a 1912 NSW listing!
- Eric VK5LP for an article about his personal involvement in the one metre (or 288 MHz – really Mc/s) band. Many amateurs cut their teeth in various ways on this band all-be-it with a little help from John Moyle and Radio and Hobbies magazine! (Many Old Timers will know exactly what I mean!)
- David VK3XU supplied a copy of part of Australasian Radio World which featured an article on AG Hull, Ross Hull's brother. This will be added to the WIA Archive.
- David VK5KC forwarded scans of A5AX QSL cards. A5AX was the call sign of Alf Traeger who was largely responsible for technical aspects of radio communications for the "The Flying Doctor" service.

Thank you to everyone who has forwarded cuttings, magazines and other material to the institute during this year. It will all contribute to preserving the history of our hobby and radio in Australia.

The committee also welcomes articles on the future of amateur radio: The changes foreseen and even predictions for our future. Many new modes are being adopted by the more progressive amateur, how are these going to set the stage for the future amateur?

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100 Years Ago

The first military wireless message

Tim Mills VK2ZTM

Sunday 28 March 2010 was the Centenary of the first military wireless message believed to have been sent in Australia.

The credit for this operation goes to Lieutenant George Taylor. The same George Taylor, who a couple of weeks earlier had chaired the meeting of wireless experimenters from which came the beginning of the WIA.

The military exercise took place near Helensburgh which is on the southern edge of Sydney. Two stations were set up, one of which was at – what is now – Veno Reserve. The object was for the forward station "B" – set up in a cave – to report the movements of an imaginary enemy back to HQ at "A" which was in a tent near Veno Reserve.

Over two days they tried various combinations of spark based equipment. To add to their troubles - it rained. About to pack up - they tried again with the equipment out of the cave and this time success.

The event is commemorated with a monument and plaque in Veno Reserve Heathcote. The plaque gives Mr Taylor the rank of Captain.

The story has been written up at intervals over the years – the latest was in the Engadine District News for 16 March 2010. [Passed on by Barry VK2FP.]

More experiments with Quad loop antennas and the dangers of 'conventional wisdom'

Felix Scerri VK4FUQ

I rather enjoy proving things wrong, especially so-called examples of 'conventional wisdom'. This article is about one of them in that the widely held belief is that most power line noise tends to be vertically polarised; after all is that not why vertical antennas are so noisy?

Well, maybe so and maybe not. One reason for my general fondness for the Quad loop antenna apart from its general excellence as an antenna is its low noise receive profile. However some interesting experiments in recent months have brought to light a couple of interesting things regarding the nature of noise pickup, at least at this QTH. Traditionally, Quad loops are fed at the bottom, giving horizontal polarisation.

This is the way my diamond Quad loop was originally fed through a 'tuned' balanced line and while it was 'quiet', power line noise would occasionally be quite loud and troublesome. As my wire diamond Quad loop has insulators at all corners, it was a relatively simple matter to physically 'rotate' the loop and shift the feedpoint position and loop polarisation.

This was done, resulting in a 'side' feed position and nominal vertical polarisation and in this position, despite 'conventional wisdom', the overall power line noise level was, on average, two and a half S points less than with bottom feed position and horizontal polarisation. This result has been confirmed by many feedpoint shift comparisons over many months.

This is not to say that vertical polarisation is always noise free, as on very dry and windy days, power line noise is apparent in all feedpoint positions; however side feed and vertical polarisation 'always' gives the lowest power line noise pickup in relative terms at this QTH. There are other factors too involving feedline balance as I have detailed in earlier articles. This is an area of ongoing investigation. The use of a so called 'hybrid' ATU balun specifically for use with balanced line as a 'tuned' line is recommended – refer Reference 1.

This side feed position looks odd and gives the loop a slightly asymmetrical appearance, but I am sold on the much lower noise pick up in this feed position.

I was also initially concerned about possibly undesirable interaction between the now vertically polarised loop and its supporting pipe mast. Whilst there is some detectable interaction, it does not appear to have any negative practical effects on the antenna. Indeed vertical polarisation appears to be advantageous as the loop's radiation angle now appears to be lower resulting in improved DX performance. So essentially it is a win-win situation!

A knowledgeable friend of mine has told me that much power line noise is actually horizontally polarised despite the often held opposite viewpoint and that certainly appears to be the case at this QTH. Other locations may be different, of course.

One of the really endearing things about loops per se, is that one can do these sorts of interesting experiments, unlike other kinds of simple antennas where things like polarisation tend to remain defined and not easily altered.

So if power line noise is an ongoing 'issue' at your QTH, as it is here, it might be worth investigating the possibilities offered by altered feedpoint position.

Have a try. You might be pleasantly surprised.

Reference 1:

Andrew Roos ZS1AN "A Better Antenna-Tuner Balun" *QEX* September/October 2005

http://www.arrl.org/qex/2005/qx9roos.pdf

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WANSARC VK3AWS Family Day 2010, at Bundoora Park

Mick Ampt VK3CH

In its fifth year, the annual WANSARC [1] Family Day BBQ get together was held at Bundoora Park, Melbourne on Sunday 15 January. With cloudy weather predicted it was a welcome change from the string of hot weather experienced recently.

As there was lots of gear to set up on my own, and to ensure our planned rotunda was secured by the club, early arrival was the key.

I was outside the park gates at 5.20 am, the ranger opened up at 5.45 am, I drove straight to Rotunda 6 and by 8 am the table of gear, and antennae, were set up and club station VK3AWS was on air on 2 m, 70 cm and 23 cm, with two sets of radios with X7000 tri-band verticals fed via triplexers.

Photo 1: The ATV and radio equipment set up and ready to go.

Photo 2: At 8.00 am, with antennas erected and ready for use.

The past year's problem of antennas being toppled over in strong gusts of wind was solved successfully this year by hanging buckets of water on each leg of the surveyor's tripod stands, which really dug the legs into the ground.

This year, the day's events were successfully televised by the writer, using digital television and utilising the experience gained after having completed analogue ATV tests from Bundoora Park some years ago, albeit with mixed results due to wet weather playing havoc with the 23 cm signals.

As portable generators are no longer allowed in the park, an alternate source of 240 volts was used, this being supplied by a 1000 watt inverter fed from the VK3CH van, which was left on idle to cope with an expected high current draw.

But disappointment struck when it was found that the 24 volt switch mode supply feeding the DVB-S ATV transmitter did not like the 'simulated' sine wave output of the inverter and refused to switch on, dragging everything else down with it.

It looked like that was the end of any digital ATV from the park. On air later to Don VK3HDX in Sydney via trusty IRLP through VK3RMH, I was relaying my tales of woe regarding the 24 volt supply's refusal to work. NERG member John Weir VK3XD was listening in and said he had two 12 volt batteries that could be strung together, even offering to deliver them to the park RACV style!

So about an hour later John arrived and the ATV transmitter was on air with battery supplied power. On screen text ID was the WANSARC club call sign VK3AWS.

Initial reports from stations watching VK3RTV 1 on 446.500 MHz said pictures were dropping in and out, so park signals appeared on the edge, but lowering the 23 cm beam a metre gave perfect results. At 23 cm even a small movement either up, down or to nearby objects can create all sorts of effects.

Once reports of 'glass hard' pictures and sound were given it was decided to leave the beam well alone, only about two metres above the ground! Trying to watch signals from the portable TV was not very reliable; the Rx beam gain was blamed but as good reports came in on the ATV liaison frequency of 147.400 FM, it was decided not to worry too much about our TV not getting pictures.

Later the next day, whilst unpacking the gear, it was found the rear socket lead was loose, so that was probably the culprit all along, a job to sort out for next year! VK3AWS may be the first fixed portable station using a digital DVB-S uplink into the newly commissioned DVB-T digital ATV Melbourne repeater VK3RTV at Mount Dandenong.

WANSARC member Bill VK3KBL, an avid experimenter on ATV, was home and offered to record the proceedings, which he did. A couple of other stations also said they were recording parts of the transmissions. Tony VK3AAZ, a long time ATV station, also said he had a perfect picture once the beam was lowered.

Photo 3: Mark VK3PI, the WANSARC Master Chef.

By midday thirty persons, amateurs, wives, girlfriends and kids were chatting and dining on snags, burgers, salads and cakes in sometimes sunny/cloudy/rainy weather. The rain did not bother anyone too much; the rotunda just became more crowded!

A good day was had by all with plenty of catching up, and exercise by kids of all ages.

The radio/ATV setup was another handy trial of lessons learnt, and practice for ATV demonstrations planned for the upcoming ARV Centre Victoria RadioFest. Now it is time to go through the notes made and start planning next year's radio set up. Better go and fix that pesky antenna socket on the TV as well...

(1) Western and Northern Suburbs Amateur Radio Club

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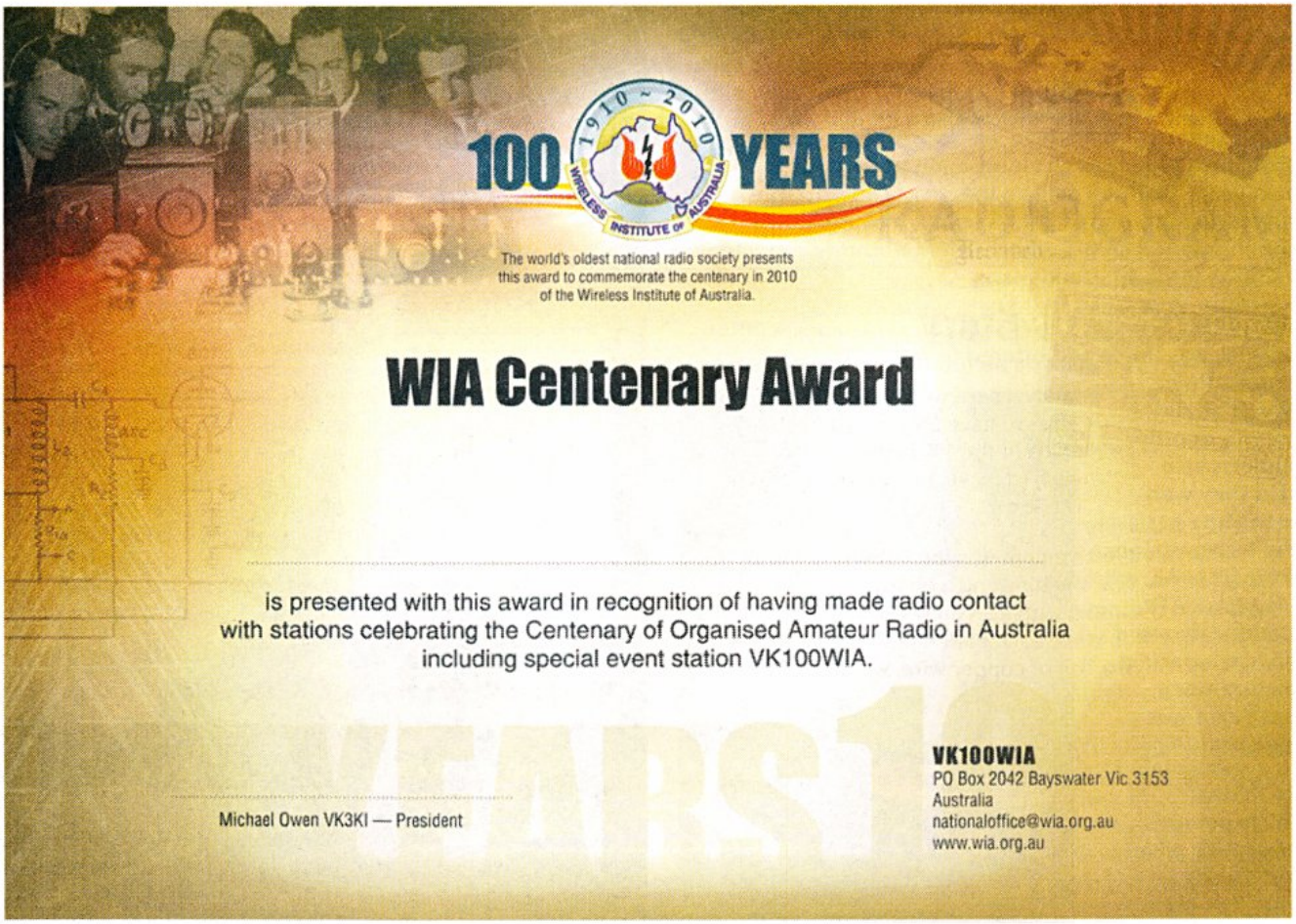
WIA Centenary Award

A limited issue amateur radio operating award is available to celebrate the 100th year of the Wireless Institute of Australia (WIA), the world's oldest national radio society.



To qualify for an award certificate contact is required with the Centenary of Organised Amateur Radio in Australia special event station VK100WIA for which a distinctive QSL will be available.

The WIA, through its affiliated radio clubs, will operate this unique callsign from 1 May to 31 October 2010. The callsign will also be used in Australia's capital city, Canberra, where the WIA Annual General Meeting and associated events will be held 28-30 May.

It will be on all amateur bands available to VK radio amateurs including the popular HF bands and the WIA Centenary Award is expected to be well sought after.

The award rules are: Those radio amateurs outside Australia need to achieve 50 points while VK hams require 100 points.

A contact with VK100WIA operated by the WIA or operated by a Club is worth 10 points (only one contact with VK100WIA operated by the WIA and only one contact with each Club) and there must be a minimum of two contacts with VK100WIA.

Contacting any WIA member between 1st May 2010 and 31 October 2010 is worth five points (Example: working VK100WIA at 10 different Clubs would be eligible for the award. Working 16 WIA members gives 80 points but then two contacts must be made with VK100WIA).

Any mode may be used; cross-mode and cross-band contacts are permitted. Satellites and repeater contacts are permitted for this award. Send AU$ 5 or 3 IRCs and a list of contacts (QSLs not required) to the Awards Manager WIA Centenary Award, PO Box 2042, BAYSWATER VIC 3153 AUSTRALIA.

Listen around the bands or visit the WIA website www.wia.org.au for frequent updates of the operator club's roster. **ar**

XPD: Christopher Bailey's radio experiences

Robin Bailey (ex VK3ZAO)

A Romney Marsh ram nudged his nose on a new wire stretched across our orchard beside the Yarra River at Ivanhoe; the ram never went near the wire again. Our Dalmatian dog soon learnt that the wire was lethal, and crawled under the wire with his tail flattened to the ground.

This was how Christopher Bailey's 1909 hand made spark transmitter ended up in the 1950s, as a very effective electric fence across his Riverside Road orchard. The spark transmitter, together with numerous other early radio items, had been lying around under our house for years and had been resuscitated for the electric fence.

At my request, Christopher Bailey, my father, who was born in 1896 and died in 1978, wrote his reminiscences of these early days of radio. What follows is an edited version of these reminiscences.

Christopher's Story

As a youth in the early 1900s it was very hard to get information on electricity. There were no popular books or magazines like we have today. It was a great joy when I read an article in the 1905 edition of The Boys Own Paper on how to make a wireless set, and so my entry into radio was born.

The heart of the instrument was the coherer, a glass tube about two inches long and a quarter inch in diameter, loose filled with iron filings and having a metal terminal to close each end. A radio signal after passing through a coil of copper wire, which could be varied in length by a sliding contact, passed through the coherer and made the filings stick more closely together (cohere), and so let a greater amount of direct current pass. This current going through an electromagnet, gave a tap on the surface of the coherer, breaking the coherence of the filings. This was a very insensitive device, but it worked if not too far from a powerful transmitting station.

Next I used the Marconi Detector, which was a coil of soft iron wire, revolving (by clockwork) through a coil of fine copper wires, this was also insensitive.

Then I used an electrolytic detector, which was a piece of

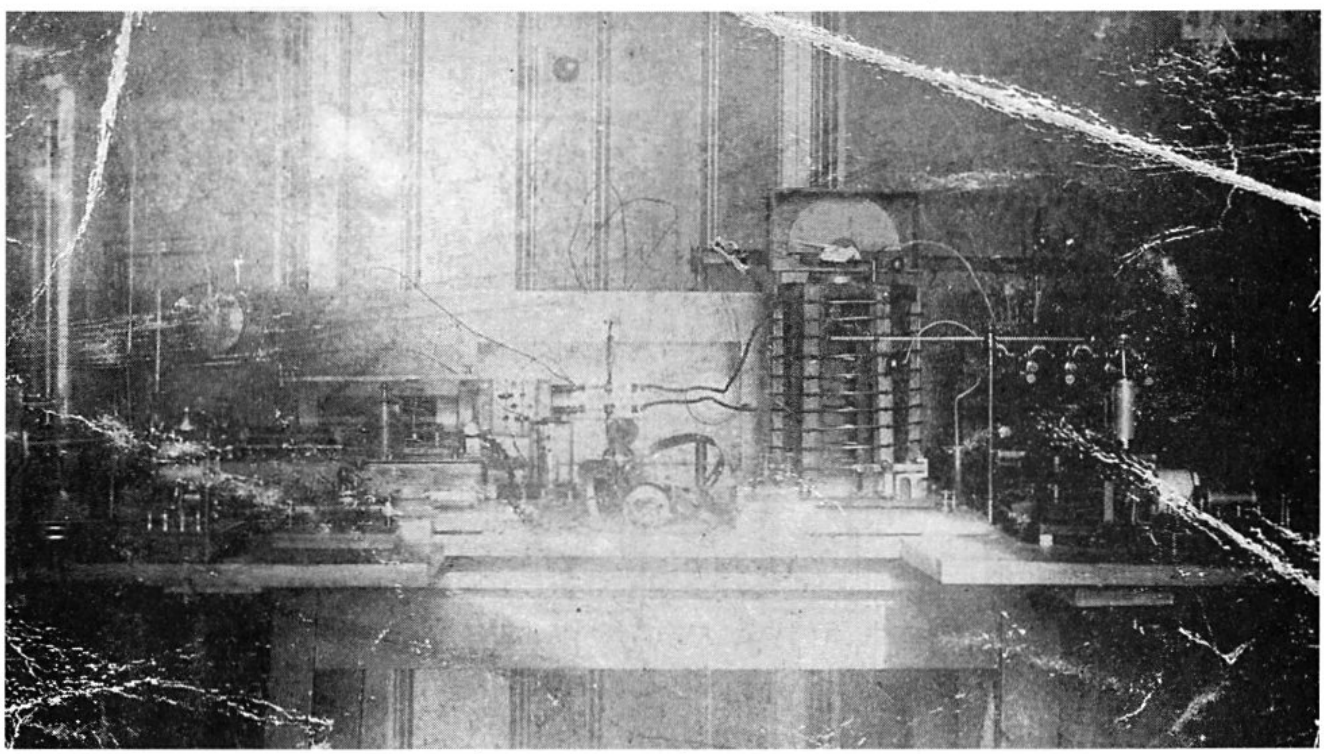


Photo 1: A 1913 spark gap transmitter.

P.M.G. 8.

COMMONWEALTH OF AUSTRALIA.

IN REPLY PLEASE QUOTE No. C.11151/12.

POSTMASTER-GENERAL'S DEPARTMENT

Melbourne, 30th July, 1913.

Sir,

I am to acknowledge the receipt of your communication undated , enclosing the sum of £1/1/-, representing the first year's licence fee, in connection with your experimental wireless station.

2. An official receipt for the above-mentioned amount is forwarded herewith.

Yours faithfully,

Secretary.

Call Signal X.P.D.

The first year licence issued

Mr C. C. Bailey,
"Abbeyleix",
Sorrett Avenue,
Malvern.

Photo 2: The letter advising Christopher Bailey of receipt of the required licence fee, with the allocated callsign noted by hand.

Woolaston wire dipped into a bath of dilute sulphuric acid. Woolaston wire was a fine wire of platinum, encased in a wire of silver, and then drawn out, the silver was dissolved away for an eighth inch, making a fine platinum tip.

Then I used crystal detectors such as galena, with a fine wire cat's whisker. To find the most sensitive part of the galena, I found the front door bell when rung was a good tester, so I had an extension wire to press the bell at the wireless desk.

Transmitting sets were more spectacular; my first a half inch spark coil which gave a vigorous hiss. Later I built a six inch spark coil which made a disturbing crackle, feeding into a helix twelve inches in diameter and fifteen inches high, wound with no. 8 copper wire. Using this spark coil with a Tesla coil I achieved a dramatic 24 inch spark.

For tuning I made a hot wire ammeter with some of my sister's hair coupled to the balance wheel of an old clock, with a pointer on it.

In 1912 I was at Wesley College in Prahran. At school I was like the elephant's child, always answering and asking questions. The science masters could not answer them, so they came to my home, saw that I had a good working radio station, and asked me to install a set – for the school.

The Head Master (Dick Adamson) told me to buy the apparatus I wanted, gave me a room and I registered the first school Wireless station in Australia.

(Editor's note: Peter Wolfenden VK3RV notes that there were two call signs allocated to schools in the 1914 book. One is XJAD, CJ Brown at Church of England Grammar School, Melbourne and the other XJDY, LA Adamson, Wesley College, Melbourne.

These two "clubs" as they are the only two listed other than the Wireless Institute stations in Sydney and Melbourne in 1914 and on the surface, they appear to be the first "club" stations in Australia – besides the Institutes.)

Licensing of radio stations occurred just before the First World War, and I received the call sign XPD. Unfortunately with the war, all transmitting equipment was confiscated. After the war I never returned to Amateur Radio, but actively built many receiving sets.

ar

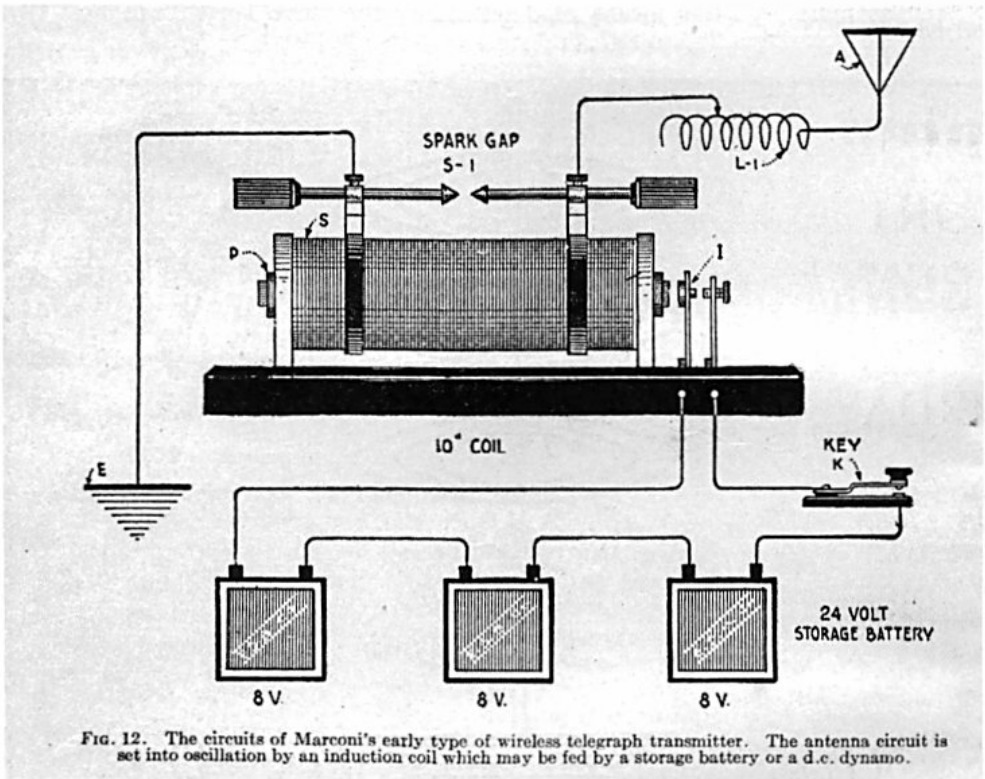


FIG. 12. The circuits of Marconi's early type of wireless telegraph transmitter. The antenna circuit is set into oscillation by an induction coil which may be fed by a storage battery or a d.c. dynamo.

Figure 1: Schematic diagram of the spark gap transmitter.

The NERG 'Gainfully Unemployed Group'

Ernie Walls VK3FM

Some of the more mature members of the North East Radio Group (NERG), a radio club located in the north eastern suburbs of Melbourne, and collectively known as the 'Gainfully Unemployed Group', meet on a rotational basis each month at the home of one of its members for a day of conversation and camaraderie. Membership of this group usually requires that you have dispensed with many of the nasties of life, like work, although anyone who has an interest in amateur radio is very welcome to attend. The luncheon usually attracts seven or eight members, but as you can see from the accompanying photo, a larger group sometimes assembles.

The luncheon generally runs from 10.00 am until around 3.00 pm, with the group enjoying the hospitality of the chosen host whilst conversational topics can be, and generally are, of any given topic. Rarely does the group fail, in short order, to solve any of the many problems of the world! However, amateur radio topics dominate the conversation, with the group being blessed with active fox hunters, DXers, ragchewers, homebrewers and technical types, with even a couple of black box operators rounding out the membership.

A broad range of nibblies always adorns the table throughout the day, and they are supplemented, generally, with a light lunch usually consisting of a soup of the month, followed by prepared or make your own sandwiches or a light cooked meal, with tea and coffee as often as you like. It is not uncommon for those partaking of the five hour feast to subsequently forego their evening meal!

In a nutshell, mostly the group just enjoys the company of their radio mates, and a great day is generally enjoyed by all. **ar**

From left to right, Steve VK3JSE, Peter VK3DU, Greg VK3VT, Ewen VK3OW, Ian VK3QL, Jim VK3KE, Chris VK3CHR, John VK3XD, Gerhard VK3EWM and George VK3MKK. In front are Dave VK3JMB and Ernie VK3FM, at the January luncheon at the QTH of Ernie VK3FM.

Foundation Corner 8

Duplexers, diplexers and triplexers: what are they?

Ross Pittard VK3CE

These names are very similar and people often get them confused.

A duplexer is a passive filter device which allows us to separate two frequencies in the same frequency band (for example, for use in a repeater).

The photo of a commercial duplexer, refer Photo 7, shows a Polar band reject cavity type often seen at amateur repeater and commercial radio sites. They are normally used to connect a repeater transmitter and receiver to a common antenna.

There are many types of duplexer designs, far beyond the scope of this article and further information on them can be found at the links at the end of this article.

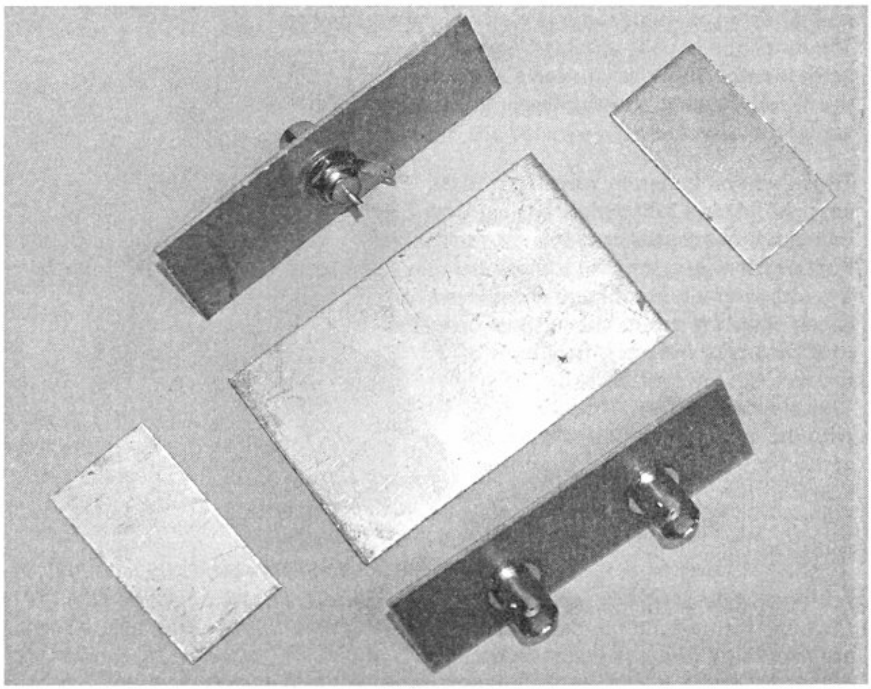


Photo 1: Cut materials pre-assembly.

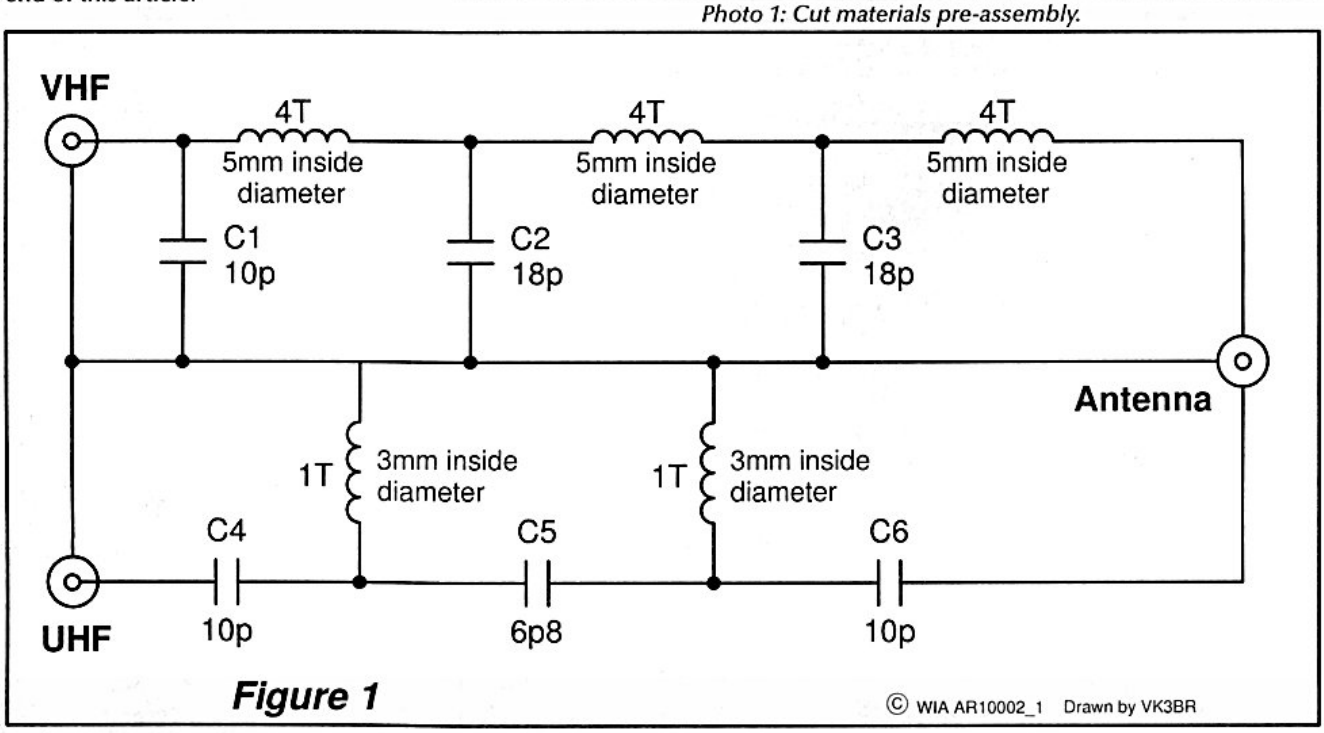


Figure 1 A typical circuit for a diplexer, essentially a low pass and high pass filter.


100 YEARS
1910 ~ 2010
WIRELESS INSTITUTE OF AUSTRALIA
Centenary Convention
Canberra
28th - 30th
May 2010
Tour the Black Mountain Communications Tower
Dine in the famous Alto revolving restaurant
Hear presentations on the history of wireless
Enjoy the Centenary Dinner with highlights: ARISS contact and Dick Smith VK2DIK
Enjoy a BBQ lunch at the Bowylie Flying Club aviation & radio museum
Receive your Centenary satchel & mementos
Celebrate our history
The WIA Centenary Convention & AGM
Canberra
28 - 30th May
Full program details and online booking
www.wia.org.au
bookings close Mon 24th May

A diplexer is a passive filter device which allows us to separate two frequencies in different bands. Two examples of the use of a diplexer are to combine VHF and UHF TV antennas together to feed your TV and of course to combine or separate amateur antennas and radios.

Diplexers can be made for any number of frequencies but the most common use found in the amateur shack is to combine separate 2 metre and 70 cm antennas into a dual band radio or vice versa. This is useful particularly if a beam is required on one band to perhaps access a distant repeater and a vertical on the other band for local work.

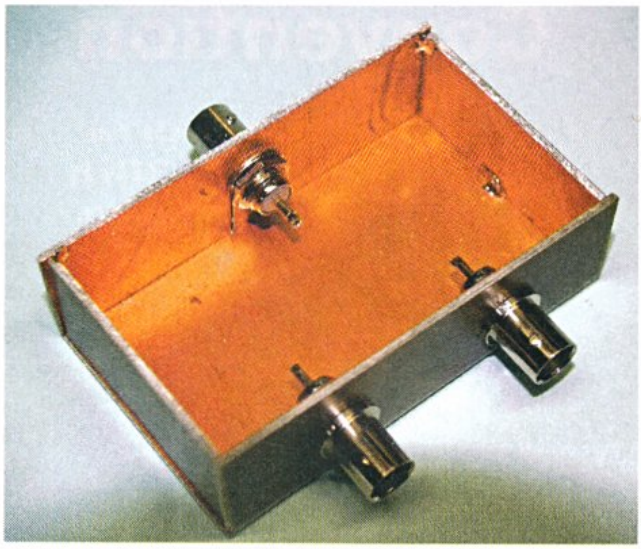


Photo 2: Spot soldered box.

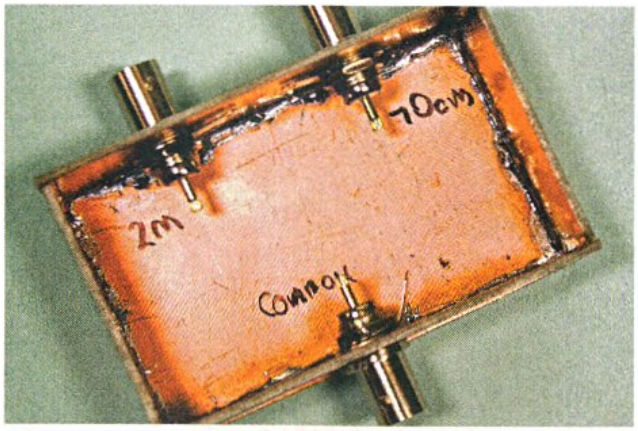


Photo 3: Seams soldered RF tight and connectors marked.

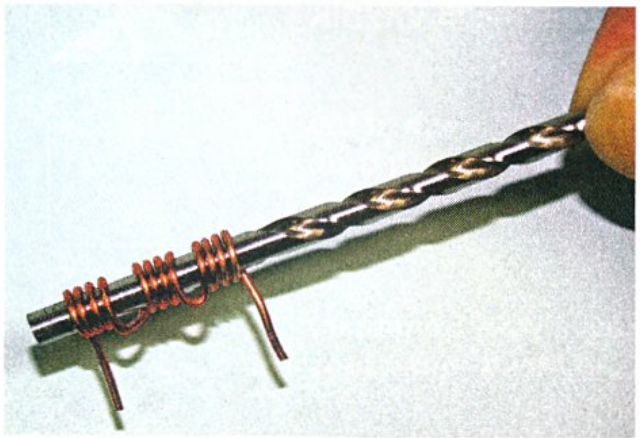


Photo 4: Using the drill bit as a mandrel to wind the wire.

The diplexer is essentially a low pass and high pass filter (and a typical circuit is shown in Diagram 1) combined into a small box. These can be purchased commercially but this month I will describe the construction of a 2 metre/70 cm homebrew diplexer.

Another term you may come across is the triplexer, the common example being a 2 m/70 cm/23 cm unit where three antennas can be connected to one radio.

I have included links at the end of the article to a website devoted to a number of design programs for developing RF diplexers and filters for those who would like to further experiment.

There are a plethora of designs on the internet for a homebrew diplexer, all with slightly different values (see the links below).

The one I used came from the Southgate Amateur Radio Club website in the UK, but the design was originally from VKNET, so it has been around the world and back.

I used this design so as to make it as simple as possible using off the shelf silver mica capacitors; some designs employ small foil trimmer capacitors which can limit the power handling capability of the diplexer.

Silver mica capacitors are available from Farnell or ask at the local club meeting for someone with a well stocked junk box to help out.

The diplexer can be built up in a small box made from tin plate, printed circuit board (PCB) or even, dare I say it, a square or rectangular tobacco tin.

The box I used was made from scrap PCB and measures 80 by 50 mm and is about 25 mm high.

1. Cut out the base and ends of the box, the height will be determined by the connecters you want to use. I made my box out of single sided PCB and it has BNC connecters. Refer Photo 1.

2. Spot solder the box together, starting from one corner, keeping everything as square as possible. Refer Photo 2.

3. When you are happy with the box carefully solder along all the seams so it is RF tight.

4. I suggest labelling the three connecters as 2 m / 70 cm and common to avoid confusion when you are assembling the components. Refer Photo 3.

5. For the VHF side wind three groups of four turns of 1.25 mm copper wire on a five mm former. I used a drill bit. Refer Photo 4.

6. Prepare the ends of the wire and fit into the box between the common and 2 m connecter.

7. For the UHF side wind two coils each of one turn of 1.25 mm wire on a three mm former.

8. Carefully mount the three four turn coils between the two metre connecter and the common, then solder in the three silver mica capacitors. Keep all the lead lengths as short as possible.

9. Solder the three capacitors for the 70 cm side together and connect between the 70 cm connecter and the common. Solder the two one-turn coils between caps and the box. Refer Photo 5.

10. I inserted a small piece of scrap PCB between the 2 m/70 cm connecters for further isolation. Refer Photo 6.

11. Double check all soldering.

Now for the smoke test

Terminate both the 2 m and 70 cm ports with a dummy load, or failing that a known good antenna. Put a radio in series with a SWR meter onto the common port. Check SWR on both 2 m and 70 cm, they should both be less than 1.5 to 1.

If the SWR is high try gently squeezing or expanding the coils on the affected side - this will increase or decrease the inductance of the coil. My prototype displayed an SWR of 1:1 on the 2 m side and 1.2:1 on the 70 cm side. Expect to see a small loss of power through the diplexer, this is normal.

When adjustments are completed fit a bottom to the box, made from PCB or tin plate.

That is it for this month, just a quick reminder to send any suggestions for the column to either myself or the Editor. Cheers and enjoy experimenting with diplexers.

Parts list

Copper Wire (Jaycar WW-4024)

6.8 pF Silver mica capacitor (Farnell 126-4867)

18 pF Silver mica capacitor (Farnell 126-4870)

10 pF Silver mica capacitor (Farnell 126-4868)

Connectors to suit

Further Reading

For a more detailed explanation of duplexers have a look at http://www.rfsolutions.com/duplex.htm

Photo 8: The finished homebrew diplexer.

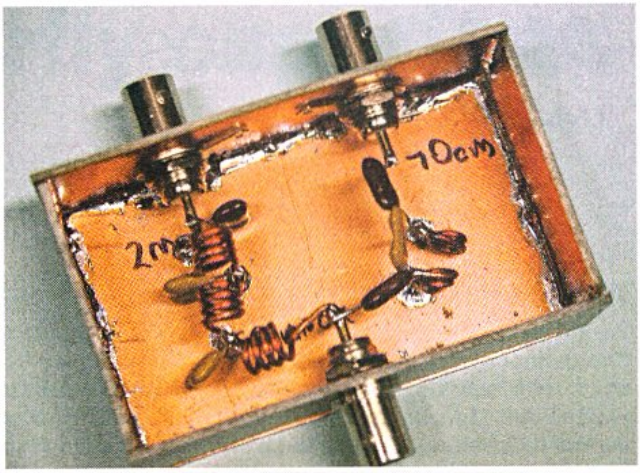


Photo 5: The box with the the wound coils.

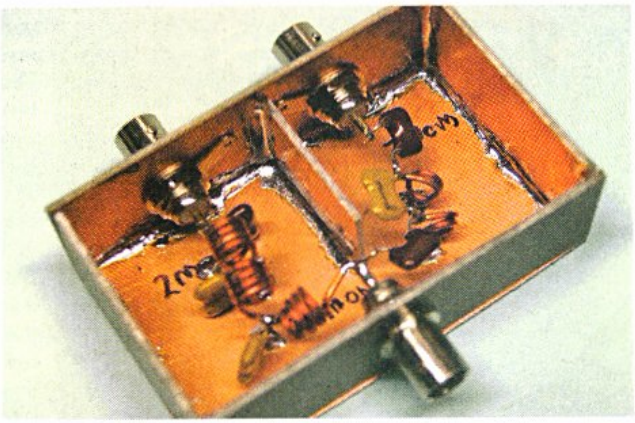


Photo 6: Isolation panel inserted and spot soldered coils.

Photo 7: A commercial duplexer.

Design programmes are available from www.tonnesoftware.com

Ready to go Diplexer Designs www.southgatearc.org/techtips/diplexer.htm

http://www.the-devil-made-me-do-it.nl/docs/2_70_diplexer.html

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ALARAnotes

Christine Taylor VK5CTY

The WIA Centenary AGM

We are thrilled to know that the first President of ALARA, Norma, now VK2YL, will be talking about ALARA. Formed in 1975 ALARA has played a part in the history of amateur radio in Australia both as licensed amateurs themselves and as the 'support team' for our OMs.

YLs in the John Moyle Memorial National Field Day

Over the weekend of 20/21 March, several ALARA YLs participated in the John Moyle Memorial National Field Day as part of the AHARS presence at Womberoo, near Swan Reach. In the photo, we have Lesley VK5LOL, Jenny VL5FJAY, Tina VK5TMC and Christine VK5CTY.

The ALARA team members at Swan Reach for the JMMNFD: Lesley VK5LOL, Jenny VL5FJAY, Tina VK5TMC and Christine VK5CTY.

They have all been involved in this Field Day as part of AHARS, for a number of years. They pull their weight as operators and also make sure all operators are adequately fed and watered. This year there were 11 or 12 of us representing AHARS.

BYLARA Pearl Anniversary

This year is the 30th anniversary of the founding of the British equivalent of ALARA, BYLARA. Anyone sponsored into BYLARA will have received a beautiful certificate and a photobook of many early and current members. What a nice way to celebrate your birthday. For those in the UK at the right time, there will be a Birthday Bash with cake! Unfortunately as far as we know ALARA will not be represented.

The VK3 gathering: L to R Pam VK5NK, Naree, Monica VK3FMOM, Elaine VK3EQY, Michi VK3FMGE, Susan VK3LOV, Michelle VK3FEAT, Jenny VK5ANW and Jean VK3VIP. Front Row: Maree VK3FSAT, Barbara, Pat VK3OZ, Tegan, Margaret VK3FMAB.

I know that face....

Sometimes familiar faces are seen in the most unexpected places.

Sue VK5AYL and her OM Richard invested in property and were asked if the firm could use a picture in their advertisements. Sue has appeared in "The Australian", "The Bulletin", and a number of magazines like "House and Garden". Her face has appeared in unexpected places.

Congratulations to Lesley

Although she has not had her amateur licence for long Lesley, formerly VK5HLS, now VK5LOL, has gained her DXCC.

Her location is a help as she overlooks the city of Adelaide so she has a better than usual 'take-off' over the sea for long path, but it is mostly being prepared to get up at all hours to listen for that signal hidden in the hash, or being patient to wait out the pile-up – though having a YL voice can be a help!

Another successful VK3 luncheon.

This lunch was a BBQ held at the home of Pam VK3NK. The group included some 'oldies' who are regulars and some 'newbies'. Jean VK3VIP has recruited a number of YLs into ALARA since she became State Rep for which she deserves a pat on the back.

As well as a marvellous barbecue, the guests were entertained by Pam playing on a new musical instrument she has just made! We are not prepared to say what the instrument is called because there is a difference of opinion about the name. If and when we find out more we will let you know, with pictures if possible.

Do not forget the ALARA AGM – first Monday night in May. **ar**

Homebrew butterfly capacitors

Eric Cook VK4FAC

The time had come when I had to face reality, at 88 years old climbing up ladders and erecting antennas was becoming a 'pipe-dream'. However the urge to get on air was still strong.

Looking through the ARRL Antenna Book, I was interested in an antenna that could be effective at low level. I found that Chapter 5 deals with loop antennas and page 5-10 caught my attention. All the construction details can be found on page 5-14.

Finding all the bits and pieces was not a problem until I came to the tuning capacitor. After researching this topic, I found my bank balance would have gone into the red if I purchased it!

How could I overcome this problem? I needed to keep on air. Looking at the required capacitor, a butterfly unit, I decided to try to make one myself, keeping in mind that it does not call for a precision-made unit and is not subjected to prolonged use.

Such a project should be able to be built by anyone with limited tools and equipment. I have the usual tools, the most ambitious being a pedestal-drill.

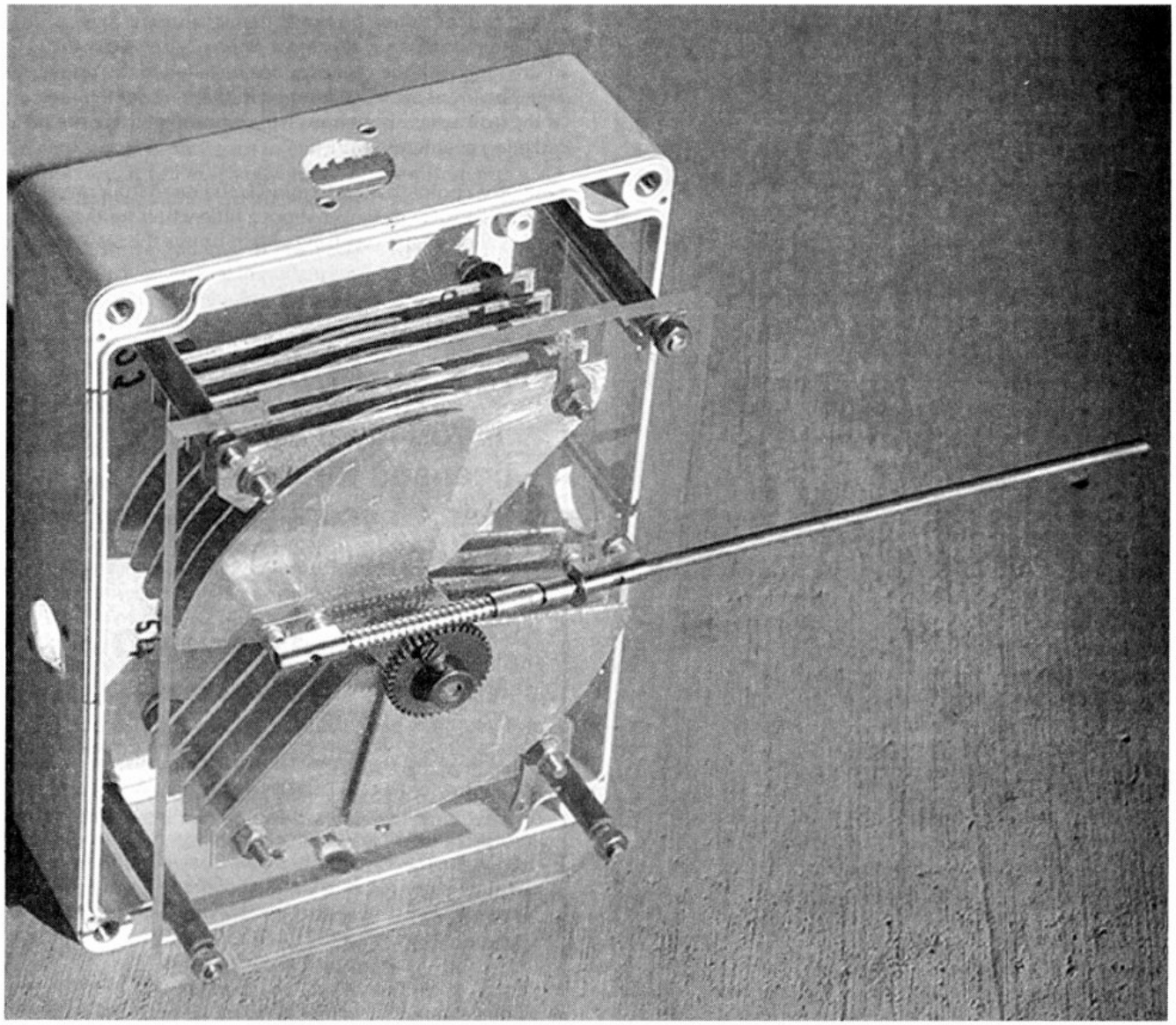


Photo 1: The homemade 40 metre butterfly capacitor.

First, make a template by drawing a square (I use graph paper) with sides of 105 mm for 40 metres and 70 mm for 20 metres. Draw in the diagonals and a circle, followed by an inner square around the centre, 16 mm for 40 metres and 12 mm for 20 metres. Refer to Diagram 1.

These sizes will cover the two bands nicely. You will need five pairs of fixed plates and five butterfly plates.

The spacers are 9 mm long and can be obtained from Jaycar. I had to make my own 'worm gear' using a parallel screw. However I understand they are now a standard stock item at some stores.

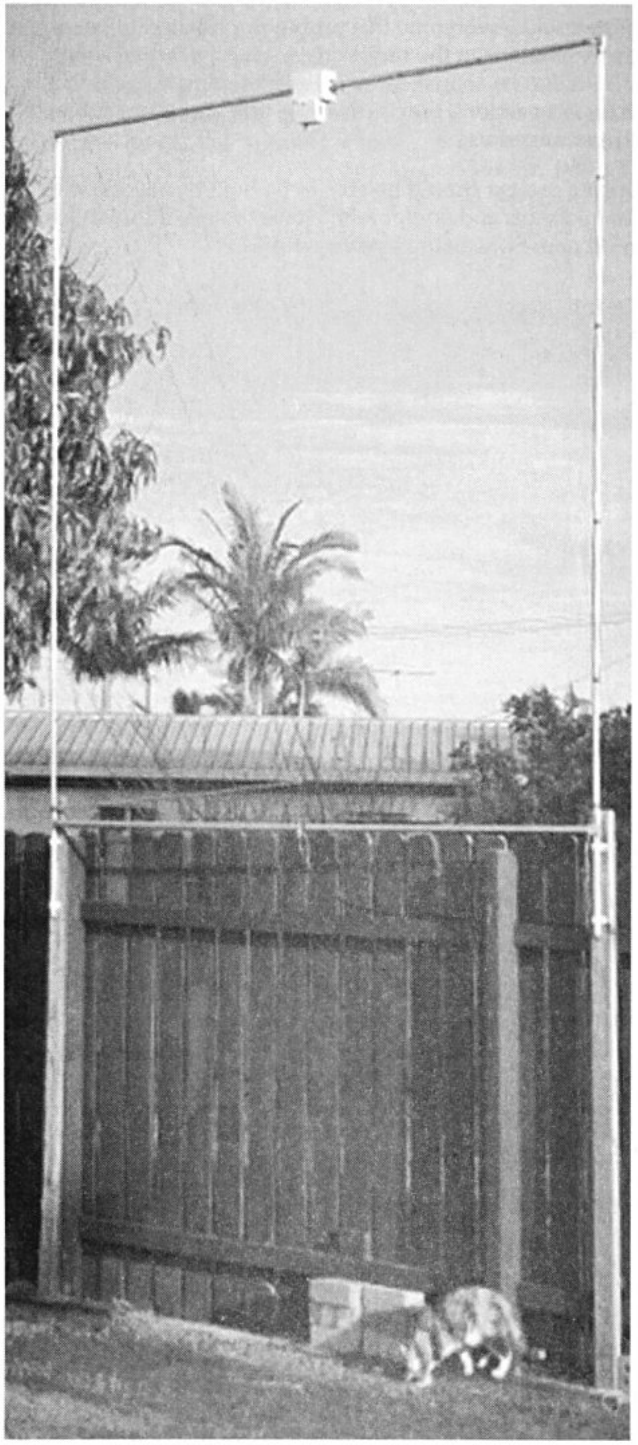


Photo 2: The homemade 40 metre loop.

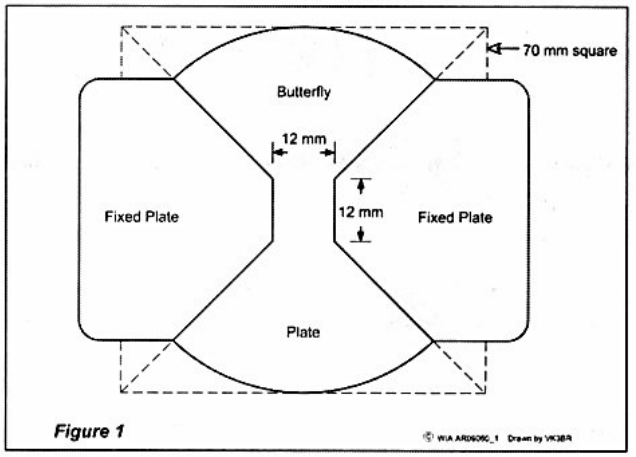


Figure 1: The template for the 20 metre capacitor.

The housing needs to be quite strong. I used sealed ABS boxes. They have stood up to wild weather so far but do need careful attention to seating of the parts, to ensure that the seal is waterproof. Photo 1 shows the 40 metre capacitor, assembled and mounted in its box.

I used copper tubing for the 20 metres antenna and aluminium tubing for 40 metres. Photo 2 shows the 40 metre loop with the capacitor box installed in the upper arm. The loops are now fastened to the fence at the rear of the house; far enough away to ensure that there are no radiation problems.

One other point to keep in mind is the need for a reversing switch; the rotor may over-shoot a little when tuning, and a quick flick on the reversing switch brings the SWR to minimum.

ar

Ladder line... making your own feedline

Rick Hill VK6XT

Having made my own two wire feedline quite successfully, I thought it would be worth sharing some of the secrets. It is fun putting theory into practice sometimes.

'Ladder line' or 'open wire feeder' is as old as radio itself... pre dating coaxial cable by several decades. The concept of a non-radiating two wire transmission line probably has its roots in open wire trunk lines used in the telephone system back in the first part of the last century. These were referred to as 'twisted pair' or '600 Ω' lines.

The basic premise of the two wire line is that if everything is balanced in regards to equal currents in each leg of the line, equal capacitance to earth and other nearby conductors...it will efficiently transfer power from the source to a load some distance away. For best efficiency the source impedance, the load impedance and the characteristic impedance of the feedline will all be the same. The characteristic impedance of the feedline is a function of the conductor diameter and the spacing between the conductors. The formula to calculate the impedance is Zo = 276 log (D/r) where D is the distance between the conductors and r is the radius of one wire. Refer Figure 1. In this case we are assuming equal spacing all the way down the line, and that the wires are separated (mostly) by air.

There is another factor that we will need to consider later... it is called Vf or velocity factor. The radio wave will travel slightly slower in a typical line than it will in air, being slowed down by the dielectric constant of insulating material between the two wires, that is, plastic. Most lines exhibit a Vf of about 0.97.

To get on to some practical construction, then. I wanted to build a 400 Ω line to feed my favourite ZS6BKW dipole. Homebrew line generally being less lossy than ribbon in wet weather, stronger, and more stable in windy conditions, I decided to use the same type of insulated wire that I made the antenna out of. The wire, in a tasteful white colour, is PVC insulated 50/0.25 extra heavy duty hook-up wire. Roughly equivalent to 13 AWG, the diameter of the wire bundle is 2.1 mm and the overall diameter 3.9 mm. By rearranging the impedance formula (using the 10 to the power of x function) we can calculate the required spacing.

The formula becomes D = r.10^(Zo/276), that is radius of one wire, times 10 to the power of 400/276.

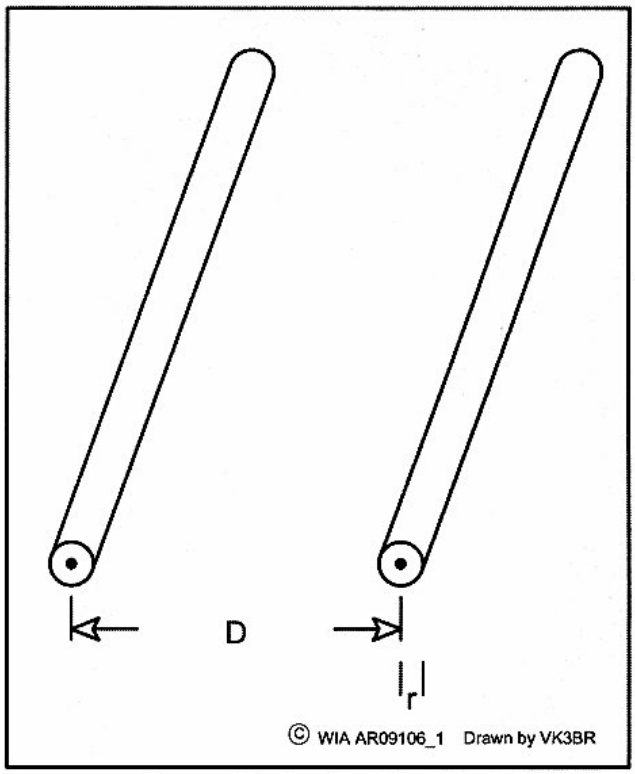


Figure 1: The feedline parameters

Substituting, 1.05 mm x 10^(1.449) = 1.05 x 28.119 = 29.525 mm.

Near enough is plenty good enough here and this equates to a wire spacing of about 30 mm. Next step is to find some suitable lightweight insulating spacers. The reticulation shelves of your hardware store will usually turn up some suitable candidates. However, in this case I used some small, grey coloured Lego© pieces. Using a 4 mm drill bit, make two holes in each piece spaced about 30 mm apart. I stretched out the feedline outdoors and slid on the spacers at 300 mm apart. To keep things in place I brushed on some PVC pipe jointing adhesive and allowed it to dry overnight. Now that I had my 400 Ω feeder, I next had to cut it to the correct length.

The ZS6BKW dipole makes use of another property of a feedline, impedance transformation. A common usage of this property is referred to as a 'quarter wave transformer' or a 'Q section'. An electrical quarter wave length of transmission line (could be coax) can transform a lower impedance to a higher impedance at one frequency. The formula for this is ZQ = √ Zin.Zout where ZQ is the impedance of the line, in our case = 400 Ω. As we

Photo 1: The homebrew ladderline in situ.

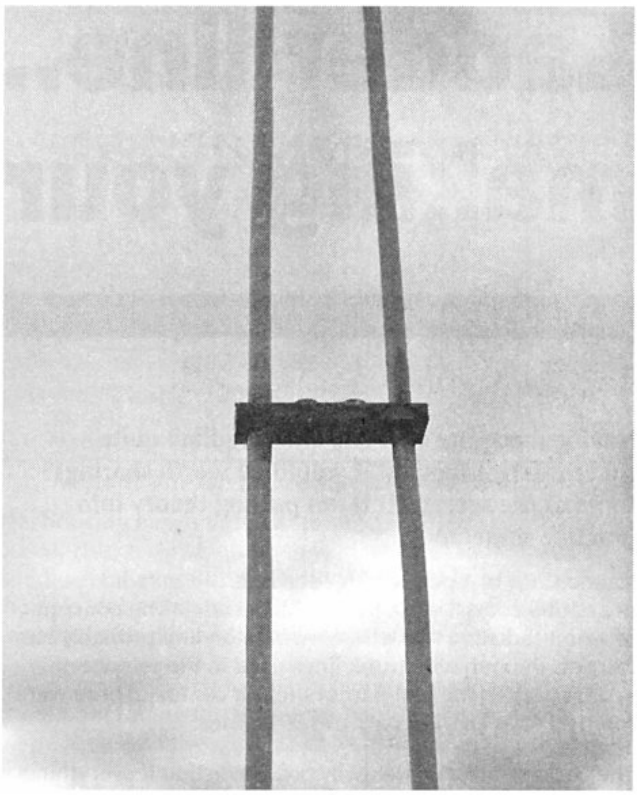


Photo 2: The Lego® spacer.

are interested in feeding our antenna with a 50 Ohm coaxial cable and a balun, Zin will be 50 Ω. Once again by re-arranging the formula we can calculate the output impedance Zout.

$$Zq = \sqrt{(Zin \times Zout)}$$

$$Zq^2 = Zin \times Zout$$

$$Zout = \frac{Zq^2}{Zin}$$

$$Zout = \frac{400^2}{50}$$

$$Zout = \frac{160000}{50}$$

$$Zout = 3200\ Ohm$$

In practice what this means to us is that it is possible to electrically check that our feedline is the correct impedance and the correct length to suit the ZS6BKW by substituting the antenna with a carbon resistor of 3.2 kΩ. It is then a simple matter to check the SWR at the test frequency to verify all is well.

I used a combination of two of 6.8 kΩ, two watt resistors in parallel to do this (near enough to 3.2 kΩ). The electrical length of feedline required for the ZS6BKW to do its impedance matching magic on six bands corresponds to a quarter wavelength on 5635 kHz.

The theoretical length can be calculated using the formula 75/f (MHz.)

75/5.635 = 13.31 metres.

As mentioned earlier velocity factor will cause a shortening of the feedline to be necessary. Wire the resistor across the end of your feedline, measure the frequency at which an SWR minimum occurs: it should be less than 1.1:1. By proportion it will be possible to estimate the required length. Trim the feedline and repeat again. The final length will be close to 12.8 metres, and this confirms that the velocity factor of the line is indeed 12.8/13.3 = 0.962.

The same procedure can be used on other unknown feedlines or to calculate for a G5RV. The G5RV feeder is a quarter wave on 7087.5 kHz. (Technically a half wave length in the middle of the 20 metre band). Note that the test resistor for 300 Ω ribbon is $300^2/50$ or 90000/50 = 1800 Ω. It will be noted that for antennae of this type the feedline is never terminated in its characteristic impedance at either end. To attempt this with coax cable results in excessive losses and may result in the cable breaking down at a high voltage node. Using open wire feeder however it is possible to use the antenna on 80 metres, for example, with only marginally increased losses due to the resultant impedance mismatches.

I have found that one of the best baluns to use at the coax to ladderline intersection is the W1JR type. One of these I made, using 10 turns of RG58 wound on an Amidon FT240-61 ferrite toroid, proved to work very well.

ar

Australian Jamboree 2010 – AJ2010

Amateur radio activity 4 – 14 January, 2010

Wal Kelly VK2ZWK

During the first two weeks of 2010, Cataract in NSW was a city of energy-charged fun and excitement where kids really had the summer of their life.

A great part of that fun and excitement was the amateur radio activity being hosted and managed by the Fishers Ghost Amateur Radio Club (FGARC). A Special Event call sign, VI2AJ2010, made a big noise around the country and also the world with over 1400 contacts recorded.

The activity was set up within the mail building and tents and each was an education area in itself, with each patrol rotating around the site.

Amateur radio (AR) was an elective activity for Scouts and the amateur radio activity was included in the Scouts 'passport' for badge awards.

As the Jamboree also coincided with the start of the 100 year celebration of the formation of The Wireless Institute of Australia, FGARC took the opportunity of using the promotional material supplied by the WIA

Cataract Scout Park has its own amateur radio building, radio equipment and antennas. FGARC maintains and upgrades equipment on a voluntary basis for the Scouts. FGARC also provides operators for Scout events.

Photo 1: The amateur radio site at AJ2010.

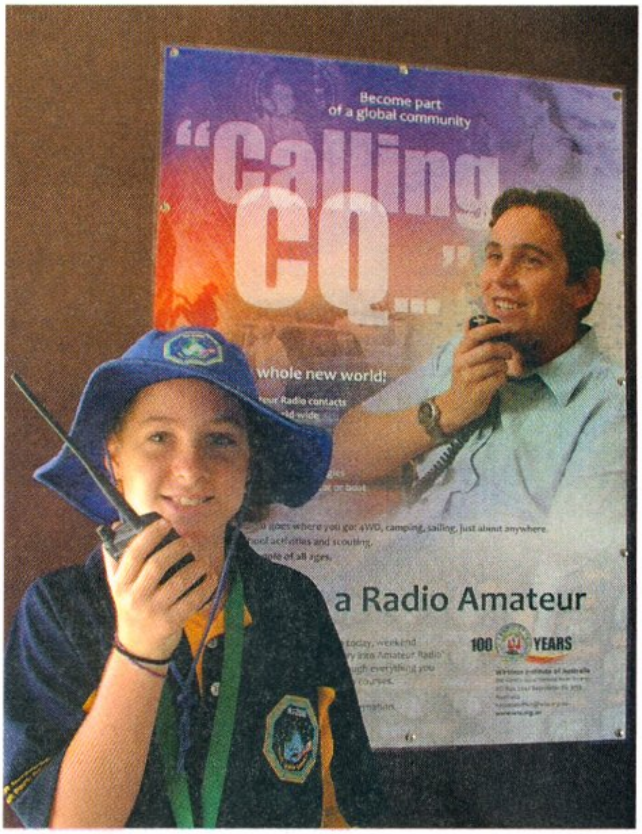


Photo 2: The amateur radio activities at AJ2010 started off the WIA Centenary celebrations.

Icom were able to loan us, for the Jamboree, a pair of IC-7000 transceivers, power supplies and tuners, plus six IC-80AD hand held radios to supplement FGARC member and Scout equipment.

All club members who attended the Jamboree enjoyed the experience, but the most satisfaction came with seeing the fun and enjoyment we were able to provide to the younger generation by giving them an insight into some areas of amateur radio operation.

Objectives

Our main objective was to provide youth Scouts with the opportunity for 'hands-on' involvement and enjoyment of a wide variety of AR communications.

Reports from visiting Scouts, Scout leaders, and others provided positive feedback of how the Scouts enjoyed their time at the AR activity.

Our secondary objective was to generate an interest for the young Scouts in JOTA and the opportunity of becoming an amateur radio operator themselves. Quite a number of Scouts advised their intention of enquiring about locally

available courses when they returned home.

The WIA 'CQ' brochure showing where they could obtain more information was provided to all Scouts who visited us.

Day Sessions

Of the approximately 10,000 Scouts and 3,000 leaders at the Jamboree, the

Photo 3: VK2HKF demonstrating equipment.

Photo 4: Scouts in awe at the rack of equipment owned by VK2HKF.

AR activity hosted 127 Patrols with a total of 668 Scouts, plus many visitors.

Our peak activity covered four patrols (24 Scouts) per hour over a three hour session.

Lynn VK2FLMK controlled entry, movement between activities, stamping of passports and exit of patrols and visitors. In addition, she provided a short introduction to our activity and the phonetic alphabet.

Karl VK2HKF, with his tent full of radios, computers and lights plus his trailer mounted 'antenna farm' always kept the Scouts in awe.

Luis VK2TAR, Frank VK2FRW, Chris VK2JCN and Ross VK2VVV provided slow scan, RTTY, satellite tracking and QSL identification.

Carl VK2HRC provided IRLP contacts around the world through his hand-held radio. David VK2LOL also assisted with the troops, as did Paul VK2LL. Various operators in the main building chased contacts for the Scouts with stations around Australia.

We were also able to run a DVD, kindly supplied by SRESU, taken at the Elmore Jamboree in 2007.

Competition

We held a daily competition using a QSL Poster supplied by NC DX Foundation which we had enlarged to A1 size and laminated. We randomly selected 20 QSL cards and listed these on an entry form. The Scouts were advised that each country in the world has a specific call sign prefix allocated, e.g. Australia is VK and referred them to the World Amateur Radio Map, on loan from VK2HKF.

Scouts were then asked to look at the poster and using the call sign, find the country, then go to the Radio Amateur World Map to find the CQ Zone, e.g. 5L2MS = Liberia = 34.

They completed the entry form and told us which prize, donated by NCDXF, they would like. The Scout with the most correct entries on a particular day was that day's winner.

We had winners from Troops 1028, 416, 434, 1036, 104, 424, 316, 1005 and 442. Whilst it was difficult to get photos of the prize winners, we did manage to get a snap on the last day

Photo 6: Luis VK2TAR enthralls a patrol.

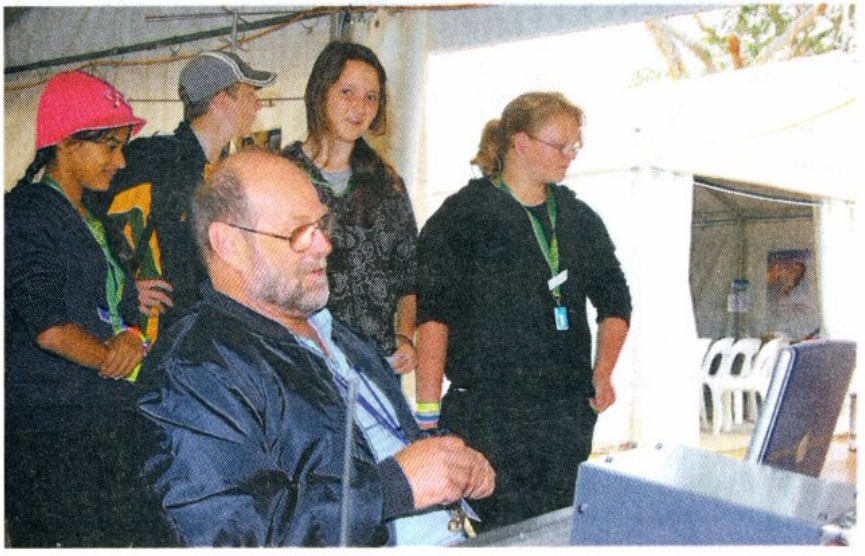


Photo 8: VK2FRW explaining satellite navigation.

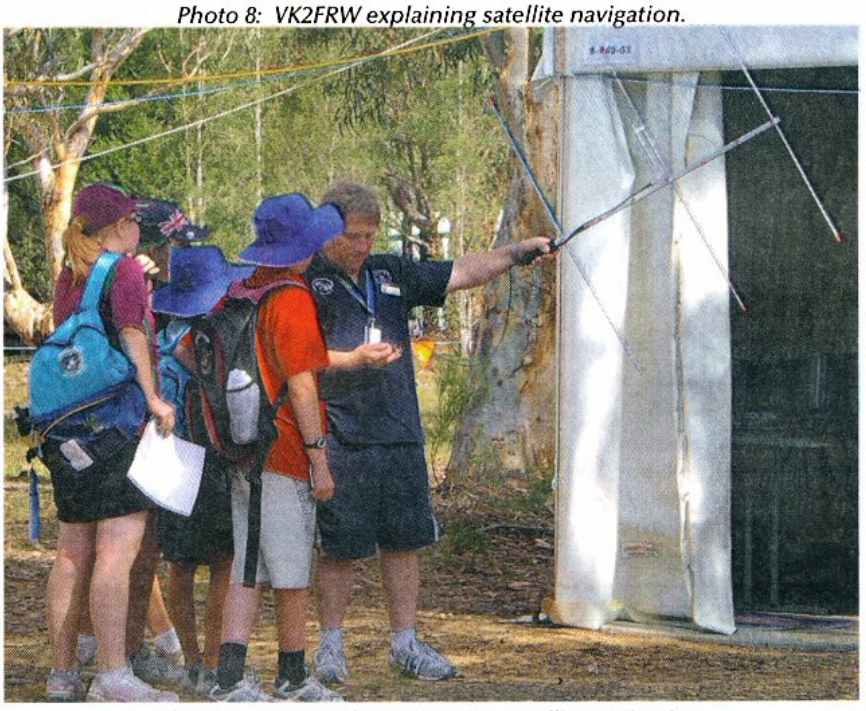


Photo 9: VK2VVV demonstrating satellite navigation.

Photo 10: VK2ZWK with the prize winners from the competition.

when we had four winners all from the same Troop!

Night Sessions

With a curfew limit on the younger Scouts, licensed Scout AR operators undertook night operations, spending extended time working frequency bands that were open.

After dinner, young Scouts Patrick VK5FMPJ, Matthias VK5MEF and Jarrod VK3FEEL chased improving HF band conditions overseas and were well rewarded. It was very satisfying to see them gaining so much enjoyment.

Later on, older Scouts Bob VK6POP, Paul VK6LL, Peter VK3TQ and David VK2LOL got amongst improving band conditions on 20 metres and the inevitable 'dog piles' of stations around the world wanting to contact us.

Future Scout Day

Saturday 9 January saw the addition of some 10,000 future Scouts and visitors at the Park to view activities that the Scouts have been enjoying during the Jamboree and whilst it was 42 deg C, we were able to host some parents and future Scouts.

Acknowledgments

In mid-2009, considering that most of the in-ground feeder lines for our aerials and their rotators terminate within the permanent AR building and its interior was not capable of adequately supporting any more than one or two connections at a time for Scouts, a rebuild of the interior to provide six bays was necessary.

This could not have been achieved in the last six months prior to AJ2010 without the many contributions from FGARC members and businesses to whom we must offer not only our gratitude but the thanks and enjoyment of the Scouts that visited us during the Jamboree.

Dick Smith Foods	$2000 towards the cost of a rotator for the 40 m Yagi.
BHP Billiton (Illawarra Coal)	$1500 towards materials cost.
WIA Club Grant	$500 towards materials cost.
Icom	For supplying additional radio equipment & promotional material.
Bunnings Campbelltown	$100 towards materials cost.
Lawrence & Hanson	Assistance on materials cost.
Rojone	Donation of coax and fittings.
NCDXF	Donation of poster and prizes.
Ted VK2AU	Organizing donations of timber, insulation and coax fittings.
Ian VK2MCI	Organizing a new hot water unit and installation.
Lynn VK2FLMK	Organizing donations, publicity, grants, carpet tiles, meals, refrigerator, signs, etc.
Craig VK2KDP	Organizing framing gun, nails, insulation, carpet tiles.
Victor VK2KVH	Donating a BBQ.
Bernd VK2IA	Donating and assembling his Cushcraft 40-2CD Yagi.
Pro.sis.tel, Italy	For their pricing assistance and quick delivery of the rotator.
Peter VK2OQ	Designing and building a new s/steel rotator mounting.
Tim Holman, North Rocks Electrical	For loan on two Sundays of the big 'cherry picker' to fix and swap aerials.
Craig VK2KDP and Ted VK2AU	For working up at 21 m heights.
SRESU	For loan of DVDs from 2007 Elmore Jamboree.
Other FGARC members who helped with the working bees.	

In conjunction with revamping the building interior, aerial re-work was necessary as follows:

Continued on page 64

VK3club news

Gippsland Gate Radio & Electronics Club

Amateur Radio: Early Beginnings

Chris Chapman VK3QB

During 2010 the Wireless Institute of Australia (WIA) is celebrating the centenary of the foundation of organised amateur radio in Australia in 1910.

As part of the celebration, in the spirit of celebrating early wireless in Australia, the Gippsland Gate Radio and Electronics Club Inc. (GGREC) will be re-enacting the historically important reception of the first direct press message sent from the United Kingdom to Australia. This was received at an experimental receiving station established at Koo-Wee-Rup, at 5 am on 5 December 1921. It is intended to re-enact the message transmission from the original location in Caernarfon, Wales, United Kingdom, to the location in Koo-Wee-Rup, Victoria, Australia between 16 and 18 June 2010.

This first message and the many that followed it proved that direct wireless communication between the UK and Australia could be reliable and therefore commercially viable. The reception of these messages also led to the crucial discovery of long path transmissions. Also the effect that the ionosphere had on propagation varied between day and night. These fundamental principles that were discovered in Koo-Wee-Rup are to this day still used by engineers, radio amateurs and listeners, to predict the best signal paths for radio transmissions around the world. The GGREC will be using the special event call sign VK100WIA for the duration of the re-enactment to further align the activity as part of the WIA celebrations.

Further information about the re-enactment and contact details can be obtained from www.ggrec.org.au/vk100wia or by writing to:

GGREC, P.O. Box 1098 Cranbourne, 3977, Victoria, Australia.

You are invited to visit us at Koo-Wee-Rup during this event. Details will be on the website closer to the event.

ar

Photo 1: A few of the operating position at the Koo-Wee-Rup station.

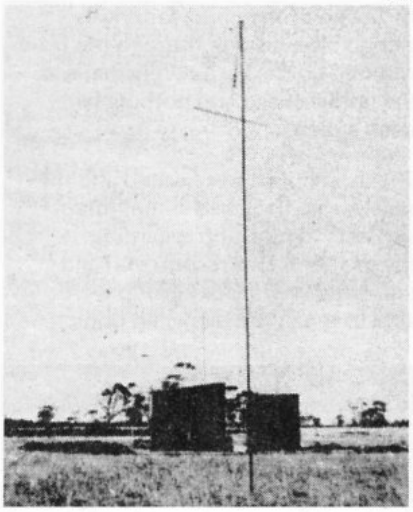


Photo 2: The antenna mast and shack at Koo-Wee-Rup.

Amateur Radio Victoria News

Jim Linton VK3PC **Website: www.amateurradio.com.au** **Email: arv@amateurradio.com.au**

Annual General Meeting

The AGM will be held on Wednesday 19 May at a new venue - the Ashburton Support Services, 296 High Street, Ashburton (corner of Warner Avenue) Melway 60 E10, at 8 pm.

In line with past practice the Annual Report was issued on the Members Section of the website, hard copies made available on request or mailed to those members who had not registered and provided their current email address.

The meeting will consider the annual reports, the profit and loss account to 31 December 2009 and the balance sheet at that date. Our Secretary/Treasurer Ross Pittard VK3CE has reported a small surplus for the year, and he notes that provided expenses are kept under control no increase in member fees are anticipated in the foreseeable future.

Come along to the AGM, a great social occasion with the business part of the meeting being fairly brief and followed by a member forum. It will include discussion about the QSL Bureau, repeaters, the possibility of a general meeting of members during the year and ways to achieve greater

VK3news ARV continued

membership participation in the state-wide organisation.

A feature of the AGM will be the opening of a time-capsule that contains contributions of members from 1985 on the occasion of the WIA's 75th anniversary.

Members may wish to note that the WIA has invited Amateur Radio Victoria (WIA Victoria) to assist it in putting to air the WIA Centenary callsignVK100WIA. This will occur on 17 to 19 May, so please give it support by making a contact to receive the special QSL card and begin to qualify for the WIA Centenary Award.

Foundation class

The next weekend training and assessment session for the Foundation licence will be 22 and 23 May. These weekends have a reputation for providing quality training and are held at the office, 40g Victory Boulevard, Ashburton.

For inquiries or to enrol contact Barry Robinson VK3JBR 0428 516 001 or arv@amateurradio.com.au

Membership inquiries

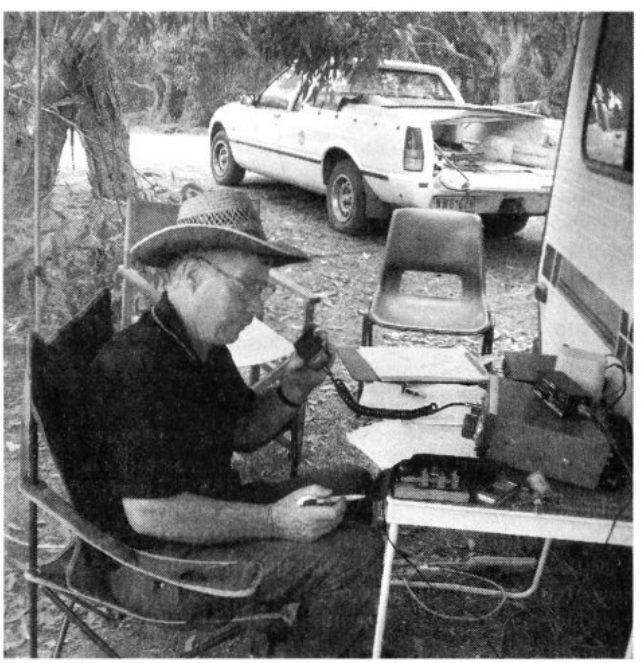
To join and support the state-wide organisation Amateur Radio Victoria costs $30 for Full or Associate membership and $25 Concession, for two years. New members are most welcome and an application form can be found on our website or posted out on request. **ar**

Geelong Radio and Electronics Society (GRES)

Rod Green VK3AYQ

Formal meetings of the Society started at the end of January with an informal barbeque. This evening although a great success was marred by an unfortunate incident. During the holiday recess our club rooms had been broken into. Entry was gained by smashing through the front wooden doors. Fortunately that was the only damage and nothing had been stolen.

The local police were called and they said they already had some "junior" suspects to question regarding the incident. Our resourceful and energetic Wednesday group were able to repair the damaged door.



Albert VK3EFO working one of the HF rigs during the John Moyle Memorial National Field Day.

Alan VK3KTE gave members an insight into working with satellites. This was a two part series which gave prospective satellite users much needed information on how to get started.

Topics covered by Alan included equipment needed, antennas, software etc. Working with satellites is a specialized area of communication which Alan was able to explain in simple easy to understand terminology.

Keith VK3AFI spent two evenings on theory and practice of soldering. Keith once taught this subject at a local TAFE college and has given this series of talks before.

Because of his practical teaching experience we have learnt the correct way to solder. This is most important when working with today's much smaller components, and members have been known to thank Keith for the lessons learnt, and SMD components now get soldered on the correct PCB track instead of sticking to the soldering iron.

The construction of a VHF Powermatch instrument being built by many of our members is still continuing. Members participating in this project were given a kit of parts to construct an RF probe.

This project has been the most ambitious that has been tackled to date. However it is a worthwhile project and members will on completing it have a versatile piece of test equipment.

Another evening was spent preparing for the John Moyle Memorial National Field Day. As with any competition of this nature preplanning is a necessity and the fore-thought did pay off.

Members set up a portable field day station at the Eumerella scout camp. This camp is situated just outside the coastal town of Anglesea on the Great Ocean Road. The camp is right at the cliff tops and is ideal for field day activities, with a quiet location which is ideal for both HF and VHF operation.

Also available is bunkhouse style accommodation which means that caravans and tents can be left at home leaving more space in vehicles for the all important radio equipment.

Visitors to Geelong are welcome to attend our club meetings which are held each Thursday evening at 2000 local time. The address is 237A High St. Belmont at the rear of the Belmont Community Youth Club.

ar

VK4news

Christopher Comollattie VK4VKR

Email: qtc@wia.org.au

Position vacant

It is time to give someone else in VK4 a go to present a monthly article for the rest of Australia to read.

Interested? If so, contact Peter Freeman editor-armag@wia.org.au

TREC

TREC members took part in the John Moyle Memorial National Field Day event from Innot Hot Springs. Setup was started Friday afternoon and we were on air for the start at 0100 UTC Saturday. A new antenna, along the lines of a "Spider-Beam" was trialled on the day.

The antenna was designed and built by Stu VK4SDD, Gary VK4FD and Dale VK4DMC. It was mounted on Jeff's VK4BOF tower trailer. The design frequency was 14 MHz and it proved to be very successful with excellent reports being received.

Contacts were made with over 500 stations in VK, ZL and other overseas stations. Members enjoyed great meals at the pub and some even relaxed in the hot mineral spas for which Innot Hot Springs are known.

Mike

Help Mike get on his bike: That dashing aero-paramedic, avid DXer and all round good guy Mike VK4MSA is in training for the Big W Townsville to Cairns Charity Bike Ride.

The ride leaves Townsville on Thursday 29 July and finishes in Cairns on Saturday 31 July, along the way raising funds for and the public profile of The Children's Cancer Institute of Australia. Mike has the entry fee but has to raise at least $500 for charity before he can participate in the ride – and time is running out! So, can you help out a fellow amateur who is doing something good?

Contact Mike VK4MSA next time you hear him on air or when he is next saving your life in a car wreck and let him know that you can support him in the ride. Find out more at http://www.everydayhero.com.au/

FNNQARG

The Far North and North Queensland Amateur Radio Gathering (FNNQARG!) will be from 11 to 14 June at Cardwell Village Beachcomber Motel and Tourist Park. It is a yearly gathering of amateurs and support crews from the Cairns, Atherton Tablelands and Townsville Regions plus lots of places in between and far away. FNNQARG is a friendly, relaxing time with the only energetic event being the traditional FNQ versus NQ Cricket Match on Sunday morning. The TREC Trivia Challenge is a rip snorter fun event too!

Come along and catch up with that face you have been speaking to for ages across the ether. Ring Reception at the park on 1800 005633 to book your accommodation as soon as possible as the long weekend in June is popular. Accommodation is motel to villa and camping is available.

RADAR

Rockhampton and Districts Amateur Radio Club have their shack at The Heritage Village up and running, a few more touches to the interior yet to be completed and a tower to be erected, an antenna or two more and all will be well. Next issue will include operational days and frequencies for contacts on both HF and VHF.

Clareview

Are you reading this article in your spare time on the May-day Long Weekend? If you are that is because you are missing out on all the fun at Clairview where the rest of us are having fun. Keep an eye open for the next issue for all the details.

Chris VK4VKR **ar**

The Toowoomba and Downs Wireless Group WIA Centenary display

On 11 March 2010, the Toowoomba and Downs Wireless Group opened their WIA Centenary and audio visual display in the Toowoomba Milne Bay Military Museum.

Radios from about 1910 through to the present are on display. As a military museum, amateur and military transceivers are to be seen, with a Time Line, a display of valves from post World War 1 to the end of the valve era.

The audio visual, presented by Matthew Weatherley VK4TMW and produced by John Scanlan VK4VIK, describes amateur radio from the spark gap days of 1913-1922 into the valve era. Mentioned are early pathfinders such as Bill Bright 4AA, later 4WB and VK4OO, who claimed the first telephony (valve) QSO with Melbourne in 1921. In 1922 the first Queensland amateur radio club commenced in Warwick, known as the Kookaburra Pals Club.

The Museum, at the corner of O'Quinn Street and Anzac Avenue, Toowoomba, is open every day from 10.00 am to 4.00 pm, until 30 June. **ar**

Matthew Weatherly VK4TMW and, in the near foreground, Phil Chapman, who drafted the Time Line.

VK2news

Tim Mills VK2ZTM

vk2notes@arnsw.org.au

March was the big month in VK2 with ARNSW celebrating the Centenary and the formal opening of the new premises at the Dural site.

It has yet to have a formal name but there has been some reference to it as the Centenary Building. The WIA AGM in Canberra at the end of this month continues the celebrations on a national basis.

Next month the **Oxley Region ARC** will hold their 35th annual field day over the June long weekend in Port Macquarie. It is a Centenary event. Full details elsewhere in this issue. Oxley Region ARC has decommissioned their packet system which was operational at the VK2RPM site. Use had declined and the space was needed for upgrades to the voice system.

The **St. George ARS** recently refurbished their Mt. Bindo 6650 system which serves the western Blue Mountains region. After 30 years in service, the club is looking to upgrade the equipment. If anyone has a surplus VHF high band repeater unit that will program to 146.650 Mhz, could they contact the St. George Amateur Radio Society. The site relies on solar power.

Westlakes ARC have a mini field day scheduled for Sunday May 30.

The Hunter Radio Group held their AGM in March with the following officer bearers being appointed. Patrons are Norm Stanley VK2BNS and Tony O'Brien VK2BOA. President and Programme Officer Len Daley VK2ZFD. Vice Pres Maurie Jones VK2CD. Secretary / Treasurer is Rodney Prout VK2CN. WICEN Officer Steve Solovieff VK2UD. Repeater Officer Greg Williams VK2HT. Beacon and Education Officer is Grahame O'Brien VK2FA. Contest Co-ordinator Geoff Wrightson VK2SH. Broadcast Committee Maurie VK2CD, Rodney VK2CN, Barry VK2AHE & Michael VK2CMM. Social Secretary Pauline Jones VK2GTB.

The **Hunter Radio Group** meet on the second Friday evening at NBN TV Studios.

Mid South Coast ARC will be holding their quarterley meeting on the second Saturday morning this month. Check VK2WI News for details.

The **Goulburn and Southern Highlands ARS** meet on the second Wednesday of the month except January at the Goulburn Soldiers Club, Market St at 8 pm. Their Sunday evening 80 metre net is coming up to 40 years of activity advises Dom VK2YDD the Publicity Officer. The club has repeaters at High Range and Goulburn which are linked. Good general coverage from the Sydney basin to Lake George on the way to Canberra. You can contact Dom at vk2ydd@wia.org.au or on mobile 0430 222 081.

NSW WICEN and the regions have various events in the next few months. Eden Creek Enduro on 15/16 May and again 10/11 July. The annual Nav Shield 3/4 July. VK1 has the Canberra Safari May 8. Waverley ARS will have their annual auction in July, not June as advised last month. Their Scout hall meeting venue has almost constant use and only in school holidays does a slot become available.

The **Central Coast ARC** has hardly recovered from this years Wyong field day before planning has commenced for 2011 advises Ray VK2HAY. A special thanks to all who put in the hard work to make the day enjoyable for the attendees.

Digital Communications Co-ordinator

Mathew VK2YAP (from VK2WI Technical committee) advises that Andrew VK2XAG has been appointed Digital Communications Co-ordinator for ARNSW.

One of the first operations will be an experiment on the 70 cm VK2RWI 8600 being set up as a software defined repeater. It will be based around a Universal Software Radio Peripheral from Ettus Research and custom code using the GNU Radio set of libraries on a Ubuntu Linux machine. VK2WI bulletins will report progress. Contact with Andrew may be made via vk2xag@gmail.com

The March ARNSW Trash & Treasure event at VK2WI Dural was conducted using the facilities in the new premises on the morning of 28 March, as was the Home Brew and Experimenters gathering in the afternoon.

The next T&T event will the last Sunday this month – the 30th.You can check out major T&T items on offer on the ARNSW web site www.arnsw.org.au Last month was also the AGM of ARNSW, held for the first time at the Dural property.

As reported elsewhere March was an important time for VK2 and ARNSW. VK2WI broadcast personnel had the honour of producing the VK1WIA News for 7 March.

To mark the Centenary day a small gathering was held at the former Hotel Australia site on Thursday 11 March. In a combined operation ARNSW celebrated the Centenary of the formation of themselves and the WIA by opening the new premises at the Dural Site on Sunday 14 March. Over one hundred members and partners attended.

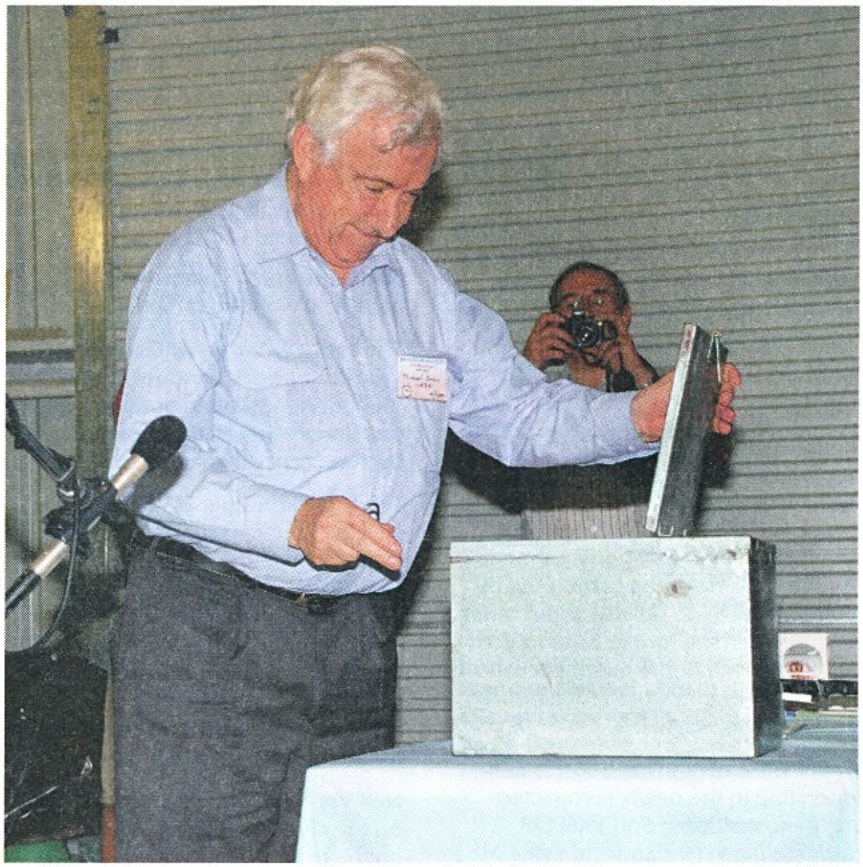
Present on behalf of the WIA was President Michael Owen VK3KI and director Phil Wait VK2ASD/DKN. The Centenary was observed by three 'elders' present who cut a Centenary birthday cake. They were Pierce Healy VK2APQ, Bill Hall VK2XT and David Thompson VK2BDT.

The formal opening of the premises was made by ARNSW President Elizabeth Langley VK2AO. One event during the formal opening was to unlock a 'Time Capsule' which had been created at the 75th anniversary

in 1985. This was done by Michael VK3KI.

In a later issue of these notes there will be a report on the contents. By years end another 'Time Capsule' will be set up for a further period – most likely the next 25 years. This will also be a good time to seek old records and photos of the past one hundred years of VK2 activity. Please check what you have and forward copies to us. Later in the year it will be practical to house them when the Dural premises are set up. More in later issues.

73 Tim VK2ZTM. **ar**



Michael VK3KI unlocking a 'Time Capsule' which had been created at the 75th anniversary in 1985, as part of the opening of the new premises at Dural.

Centenary Plate and Mug

Tim Mills VK2ZTM

As part of Amateur Radio New South Wales contribution to the Centenary celebrations, a commemorative plate and mug set has been produced. The mugs has a 250 ml capacity. The plate is 20 cm diameter. Both carry the same design – a drawing from a photo of the VK2WI transmitter building and towers.

Around the drawing is "Commemorating the Formation of the Wireless Institute of NSW 1910 – 2010". This was the name used until the 1920s. The plate costs $25 and the Mug $10. Packing and postage is determined by destination.They are available at the Dural site and at some field events.

Inquiries can be made via the office telephone and leave a contact message. 02 9651 1490. FAX 02 9651 1661. Write to ARNSW P. O. Box 6044 Dural Delivery Centre NSW 2158.

ar

Mugs and a plate made to commemorate the centenary of organised amateur radio in Australia.

The VK2WI site looking from the front gate. The new building is to the left.

VK6news

Keith VK6RK - vk6rk@wia.org.au

Neil Penfold centre opens

Welcome to the VK6 Notes this month, and a busy month it was! The NCRG Open Day and WIA 100th Anniversary celebration took place on Sunday 14 March at the Neil Penfold State Amateur Radio Centre in Whiteman Park.

Over 140 people turned up to see Neil open the result of almost five years effort by the 40 odd members. All the work has been carried out by members with no outside input other than some crane hire to raise towers. Hopefully one of the members will put the story into words for a future article in this magazine.

There were several car booters operating in the newly compacted car park, including Bob VK6POP running the WIA stand and Kylea of Hamshack tucked cosily inside the airconditioned meeting hall.

The club was fortunate to receive a donation of a Yaesu FT-897 from Ian VK6LCT and his company Timberden Plant Hire and a Quansheng handheld was also raffled.

The Yaesu was won by Richard VK6HRC and the handheld by Nathan VK6F...? A third prize of a wrist watch was donated by Hamshack and won by none other than your scribe!

The NCRG President Wayne VK6EH gave an excellent rundown on the club's history and facilities and then Neil VK6NE did the honours and cut the ribbon, declaring the club officially open. A free cool drink and sausage sizzle were provided and much conversation took place for the next few hours. Thanks to one and all for attending.

Neil VK6NE wrote his meanderings on the club email group, commenting on the events of previous weeks and keeping those not otherwise informed what had been going on at the club. He had this to say after the event; apologies Neil for publishing his text!

"Members of the NCRG.

One might start this as if reading a novel. The dawn broke with indications of a beautiful sunny day, with some cloud about and the conditions ideal for the long awaited Official Opening of the Neil Penfold State Amateur Radio Centre.

But nothing could have been truer!

But to me, it was more than just a beautiful day, as I had been given an invitation to make a mark in the history book of amateur radio, namely to cut the Red Ribbon to the entrance to a building and the surroundings, built by members of the Northern Corridor Radio Group.

And what an honour to be given, as anyone who has seen, or will in future see, the culmination of the past four and a half years work by the members, lay in my hands. To be given the opportunity to applaud their initiative, dedication, work and sheer perseverance, sometimes in the

Some of the attendees at the NCRG open day.

face of adversity, was a great honour.

As stated in my address to the 100 plus gathering, 5000 man hours, buildings and all the associated, valued by me at $150,000, was not attained by handouts, but by blood, sweat and tears.

By cutting the ribbon, the NPSARC became a part of amateur radio history, and it was my privilege to be the person who brought this centre for our great hobby to the attention of amateurs in West Australia, Australia and the World.

Neil VK6NE, member of the Northern Corridor Radio Group Inc."

Thanks Neil, we are honoured to name it after you!

To other matters now, from the VHF Group a report on the SDR project from Luigi VK6YEH.

"With SDR becoming more prevalent, amateurs were starting to face a wide variety of possible construction projects from the simple, such as the SoftRock series, to the complex, such as the TAPR's HPSDR units. With this in mind, the VHF Group decided to sponsor an activity which allowed its members to construct an inexpensive SDR. The units chosen were Tony Parks (KB9YIG) "SoftRock v9.0 Lite+USB Xtall receiver with Si570 and electronically switched BPF kit" and "SoftRock v6.3 RXTX+Xtall transceiver kit with Si570 and RX BPFs."

Members could chose which kits they wished to build and, upon paying a deposit, their kits were added to a bundled shipment, thus saving postage costs. In the end, 14 units were ordered and most have been built. The remainder are awaiting a rainy day, which in this part of the world, has been a long time coming.

Unfortunately, the kits were short of enclosures, connectors and other parts required to ensure a fully operational radio receiver. Rather than simply pass the kit on, Fritz VK6UZ, Merv VK6BMT and Luigi VK6YEH had a separate meeting to list and source the additional components required to give the members a self contained SDR.

On arrival of all the components, Fritz and Merv spent many hours sorting them into individual packets. Fritz went one step further, and soldered all the SMD components to their respective boards so that members with shaky hands, or poor eyesight, did not have to contend with that aspect of the construction - many thanks Fritz. Merv added his accounting talents to ensure the cost of each unit was kept to a minimum. Luigi produced a scale drawing of all the components and arranged them in the enclosure to ensure all the parts came together properly. From this, a series of drilling templates was produced. Members simply stuck the appropriate template on the box, centre punched and drilled the specified holes. An attempt was made to have the activity night before Christmas; however, due to delivery problems with a part, the units could only be distributed during the November meeting. This gave members a couple of months to build their units, with many of them already completing the exercise by the January 2010 meeting.

At the January meeting, a few members used the evening to continue with assembling their kits. Others, who were yet to commence construction, looked over and asked many questions, such as to which were the best avenues for tackling some of the "hairier" parts of the construction, specifically the winding of the transformers. All in all the activity night was a success with many reports of operating radios now being utilized. It is hoped these units will form the basis for evaluating features and specifications on more advanced SDR radios.

So things are happening at the VHF Group! Why not come along and join in the activities. I was hoping to have some reports of local group activities in the John Moyle Field Day to bring to you this month but nothing has arrived so far, perhaps next month.

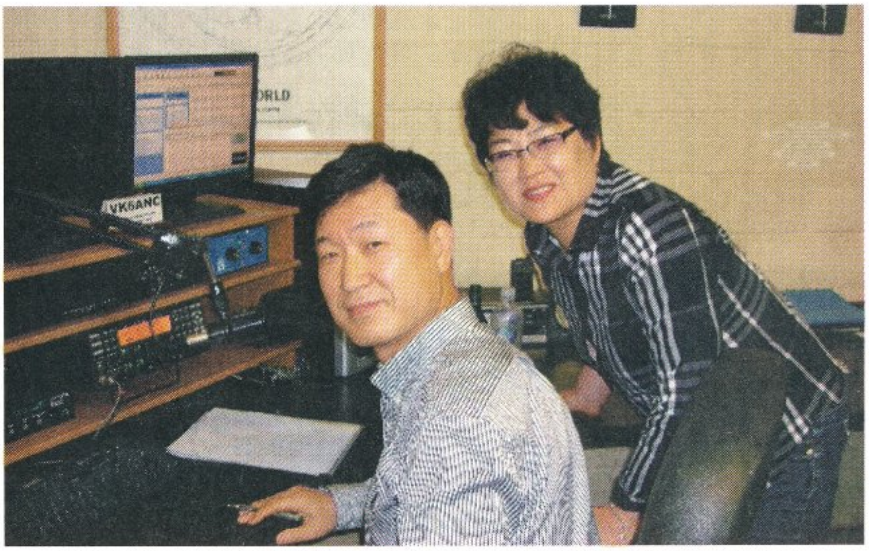
The NCRG has been visited by overseas amateurs a few times lately, two being DS5UCP King and DS5VUP Kim, a husband and wife team who were brought to the club by Mirek VK6DXI while on their travels. They took time out to operate the club station and have some fun. Andrew VK6IA made them all most welcome, showing to all that the club facilities are always available to visiting amateurs should they wish to use them.

Also this month the club was visited by David G3UFO, who has also held the call VK6DJO for many years and has visited the club at three of its past locations. David is an overseas member and was able to use the club station to operate in the Maritime Radio Day contest http://www.radiomaritimeday.org/

This is an informal type of contest for ex ships radio officers and ship to shore station operators to exchange reports and their last ship or shore station. David is an ex ships RO and relished the chance to use the club's facilities to have some fun while on a month's holiday to Perth.

Due to the Easter break I am a little late sending this report in so I will close now and again request input from local groups, or this will turn into the NCRG report!

ar



King DS5UCP and Kim DS5VUP, visitors to the NCRG, in the radio shack.

VK7news

Justin Giles-Clark VK7TW

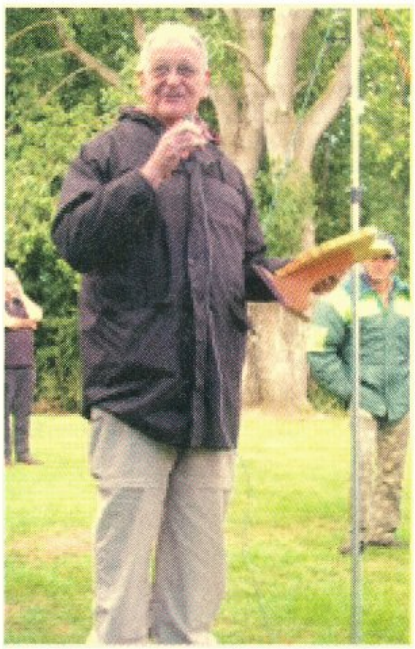
Email: vk7tw@wia.org.au
Regional Web Site: reast.asn.au

Meet the Voice BBQ

Sponsored by the Sewing Circle Net, *Meet the Voice* took place on 21 March at the Ross Caravan Park over looking the Macquarie River and the beautiful Ross Bridge. Attendance grows every year; 76 people registered this year. Lin VK7AJ won the ATU raffle, thanks to TTS Systems, and Warren VK7FEET won the hand-held.

We welcomed some very special guests: from Switzerland, Hans HB9CNM, Steve aka Dr Dag or VK3DAG and of course there was Dave VK3JKY and Claureen VK3KMB from TTS Systems who are great supporters of the MTV event.

The Sewing Machine award for the most loquacious amateur on the Sewing Circle Net was presented to Cedric VK7CL. Special recognition awards went to organiser Don VK7AY for his many years of service to the Net and the event and to Justin VK7TW for his many years of service to amateur radio in Tasmania.



Cedric VK7CL accepting the Sewing Machine Award.

The BBQ was fired up and a relaxing afternoon enjoyed by all. Thanks to everyone involved. A short video presentation of the last four years with original harp sound track of the *Meet the Voice* event has been produced and is available on YouTube.com—just search for VK7TW.

Congratulations to Hayden VK7HAY for being awarded the Best Electronics Project (North) and Jarrod VK7RJ for Best Soldering Project (North) as apprentices with the Tasmanian Skills Institute.

Northern Tasmania Amateur Radio Club

NTARC's March meeting was a social BBQ at the beautiful Lilydale Falls and from comments was enjoyed by all. NTARC is renowned in VK7 for its members' collection of caravans and motor-homes all sporting arrays of antennas....HI HI. Tony VK7YBG has re-invigorated interest in the formation of a Northern WICEN group and recently held a BBQ at the Riverside tailrace park to get interested amateurs together. For more info go to: http://groups.yahoo.com/group/wicennorth

Cradle Coast Amateur Radio Club (CCARC)

CCARC provided communications support for the Kentish Equine Endurance Riders on 13 March. The event had 77 riders doing the 80 km ride and about 45 riders doing the 40 km ride. Many thanks to David VK7EX, Steve VK7FXXX, Hamish VK7FHAM, Bob VK7MGW, Ursula VK7FROO, Dick VK7FORF, Keith VK7KW, Mike VK7MH and David VK7DC.

Members are also reminded that there is another 24 hour event coming up at St Helens, starting midnight Friday 21 May, and if you want to be involved contact David VK7DC. The 27 March CCARC meeting saw a demonstration of the Radio Mobile propagation and coverage software application.

Radio and Electronics Association of Southern Tasmania

Firstly congratulations to Rex VK7MO who recently celebrated 50 years of his AOCP licence. REAST's March presentation was a fascinating talk by Richard VK7RO and his many experiments to optimise antennas for his favourite band (40 m) at the historic Queen's Domain clubrooms. Richard talked about experiments with Beverages, K6STI designs as well as loops including - EWE, Flags or Pennants and K9AY's ideas. Many were modelled with EasyNEC to predict the performance and radiation patterns and then tested in the field. The presentation was recorded and has been added to the ATV library. Thanks Richard.

We have had many visitors to our Wednesday night ATV nights with Canadian amateurs Bob and Judy and Patrick VK2FPJB who is the nephew of Steve VK7OO now residing in VK7. Patrick is being trained up in the operation of our ATV studio, on

The group at the Meet the Voice event.

continued foot of facing

2010 WIA Grants scheme

Friday 30 July is the closing date for applications for the WIA Club Grants Scheme for 2010.

Full details of the 2010 rules for the scheme can be obtained from the WIA Web site http://www.wia.org.au/members/affiliation/about/ together with a template setting out the suggested application headings for an executive summary, identifying how the club seeks to meet the objectives of the scheme and guidance regarding supporting documentation.

WIA President Michael Owen said that the Board was pleased with the results of the 2009 scheme and believed that there was overall support from members for a continuation of the grant scheme. In 2009, there were 17 applications and some 10 projects were given financial support from the scheme. The Board has decided to vary the rules from those that applied last year:

The Board directs the Grant Committee to recommend applications which focus on projects and activities (to be conducted before 1 April 2011) to attract new amateur radio operators to the hobby, also projects supporting emergency communications and preparedness for emergency communications.

The WIA Board has again this year allocated $6,000 for distribution to qualifying Affiliated Clubs. The object of the scheme is to promote and advance amateur radio, the WIA and its Affiliated Clubs by supporting useful and/or innovative projects undertaken or to be undertaken by Affiliated Clubs. Affiliated Clubs with a membership including at least 50% WIA members qualify to participate, though the Board has discretion to allow a lesser percentage in special circumstances.

President Michael VK3KI said that the names of the 2010 Grant Committee would be announced shortly. The Committee would recommend to the Board the projects that should be supported and the amount to be allocated to each supported project. "I urge affiliated clubs to participate in this opportunity" Michael said; "however, it is most important that clubs read the rules very carefully".**ar**

VK7news

ya Patrick! Our ATV presentations have had a distinct "Geocaching" theme over the last month with many members being and becoming interested in this hi-tech treasure hunting game and combining it with amateur radio.

I would like to thank Jack Swart VK2TRF for lending the ATV group his DVB-S transmitter for well over 14 months! This transmitter has enabled the group to experiment with digital TV. Thanks a million Jack.

North West Tasmanian Amateur TeleVision Group

Several NWTATVG members assisted with backup communications support for the Rally Tasmania event at the end of February. Thanks to all, especially Bob VK7MGW, Ursula VK7FROO, Dave VK7DC and Lucas VK7FLSB. The SSTV gateway is now under the repeater VK7RTV and is available on simplex 145.625 MHz in the Ulverstone area. For local contact switch FSKID off and switch on FSKID to access the internet gateway.

WICEN Tasmania (South)

Sunday 28 March saw WICEN South providing safety checkpoints for the Southern Tasmania Equine Endurance Riders in the Woodstock area of the Huon Valley. The network consisted of a base and five checkpoints. There were 80 km, 40 km and 20 km courses. This is a great family event with the WICEN crew identified by the tall masts towering above the horse floats!

ar

Care and Feeding of your Pet Ham

Pet hams are so intelligent they often seem human, but they can be difficult to raise. Only someone with great patience should attempt it. In case you do, here is a guide to the basics.

Living Area: A pet ham needs a private nest area, an entire room where it will not be disturbed. Your pet ham will spend many happy hours alone there with its treasures – boxes, wires, bits of metal, glass, paper, etc. that it will bring home whenever it ventures out. You will want to encourage your pet ham to confine its activity to this room to prevent the entire house from being subjected to noise, clutter and the boring of holes in the walls.

Expenses: Keeping a pet ham is expensive, but, unlike most common pets, a pet ham can be trained to work outside the home for a few hours each day. It may even bring in enough money to offset its expenses.

Feeding: A well-behaved pet ham will eat with the family occasionally, but it will feed more comfortable and secure taking its meals in the nest room. You must be sure your pet ham is well supplied with food and drink during the long periods it spends alone in there, even if it does not beg or whine.

Obedience Training: A pet ham can be trained to perform simple tricks, the easiest and most common being "sit" and "speak" Do not be alarmed if it practices them for hours at a time in the nest room.

Health Problems: The pet ham typically suffers lower back pain and minor throat irritations from too much sitting and speaking, but health maintenance costs tend to be minimal.

Travel: Your ham pet will gladly travel with your family by car or even by air, if allowed to bring along certain familiar items from the nest room. Most pet hams enjoy trips to places where they can meet pet hams from other families.

Breeding: If you plan to breed your pet ham, you should do so as soon as possible after you get it. As a pet ham matures, it becomes increasingly reluctant to engage in activities not associated with its nest room collection.

Sourced from the HAM ATV Mailing list by Justin VK7TW.

VK5RAE Node 6909 repeater upgrade

Peter Horgan VK5BWH

In August 2009 a small group of dedicated hams, Alan VK5AJ, Les VK5KLV, Peter VK5KPR, Mick VK5MIK and Peter VK5BWH along with Bob, Gerry and John, the muscles (sorry, 'support workers') left from Alan's Stirling North QTH to go through the Flinders Ranges to Quorn then out to *Argadells*, the station where Mt Arden is located.

From the homestead to the top of Mt Arden (844 metres) the 4x4 track snakes its way through rocky creeks, very scenic gorges and flat plains with some very steep climbs and descents before you arrive at your destination. The view from the top is magnificent.

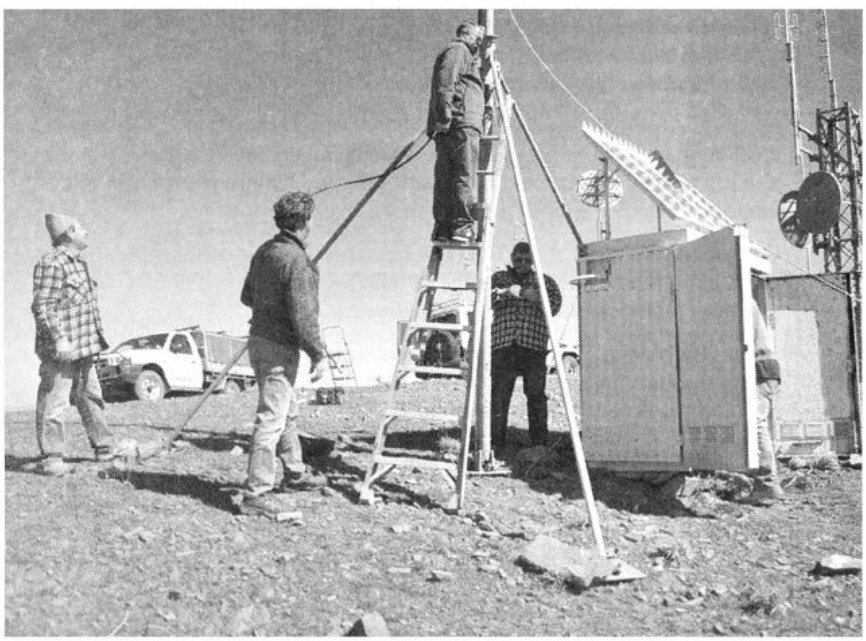
There were a number of reasons for this visit. It all started when we were contacted to gauge the support for the installation of an IRLP node in Port Augusta. We discussed this proposal and agreed that we would proceed with this project. It also gave us the opportunity to upgrade the repeater with new cavities, antenna and batteries.

The primary problem with VK5RAE seemed to be voltage drop. As the site is solar power the problem would arise after a number of days of continuous cloud cover. These occurrences meant either the solar panels or the batteries may have had a problem. A check of the solar panels found that they were OK but some of the wiring connecting the panels needed maintenance be carried out. One extra panel was installed which brought the number to four.

Some battery connecting terminals had corrosion and one six volt solar sun gel cell seemed on the verge of failure so they were replaced with two identical near new six volt cells.

The next job was to recover old antennas and install new antennas on the nine metre Triad tower which meant lowering the centre pole. Quite a simple task, as the centre pole which supports the antenna is hinged at the base and that is where our support workers came into their own.

We installed the new RF Industries Col4, and checked the coax feed and connections - all appeared OK.



Les VK5KLV with beanie, John, one of the helpers, Peter VK5KPR on the ladder, Peter VK5BWH and Alan VK5AJ, in the box, hard at work at the VK5RAE Mt Arden site.

After sealing the coax connection and securing coax to centre pole the antenna was raised back into position. Next was to take the recovered RFI antenna and install it on top of the equipment cabinet. This antenna is now in use for the APRS system and a new coax feed had to be brought into the equipment cabinet. Reports received from APRS sysops indicate that the system is working very well.

Inside the equipment housing we installed a new radio and cavities for the APRS system. A swap over set of cavities was also installed as the old ones have been in service for over ten years and need to be retuned, and that was the easiest and simplest solution.

After the final check of all power, coax and transmitters the system was powered up and all appeared to be working fine. We made a few local contacts via the repeater and the reports were very pleasing and it appeared to have a better coverage area. We worked Graham VK5GH on the way back home connecting via IRLP and this was the first time that the system worked without the loss of packets.

We would like to thank Graham VK5GH for all his encouragement and support organizing and transporting various pieces of equipment to Port Augusta and sometimes back to Adelaide. We know that Graham was the front man of a dedicated team working away in the back ground to make this upgrade possible.

Frank VK5KV, who lives in Woomera and travels the Stuart Highway to Port Augusta regularly, says coverage on that trip has improved and is near continuous. He also notes that with a reasonable antenna, VK5RAE is accessible from within Woomera township – about 160 km.

Visit the website at http://sites.google.com/site/vk5rae/ or connect to Node 6909 for a chat.

ar

AHARS

Christine Taylor VK5CTY

High performance — *in Software Defined Radio and the John Moyle*

High Performance Software Defined Radio (HPSDR)

Two of our members gave us a very interesting talk about High Performance Software Defined Radio (HPSDR). Dean VK5LB and Hans VK5YZ have both built radios to this design and are very keen on them. Dean discussed the construction then Hans gave us a practical demonstration. Both OMs could have filled the whole evening and their enthusiasm was obvious.

The principle of software defined radios is a very active field for experimenters and generates much on line discussion. All round the world people are working to improve or modify the system.

To build a radio like this you do not need a high power computer but you do need to have one you can dedicate to it, including a monitor. The system is made up of a number of modules which you purchase, either already assembled or as a kit to make up your self. Quite a smallish aluminium box can be used to mount it all in so it does not take up a large amount of your shack space.

When you are using the radio you see an enlarged front panel with lots of 'buttons' to push, using the mouse, on your computer screen with a full spectrum display. It is all alive so you can see as a new station comes on air. To hear him you move your cursor onto his 'blip' then you can talk to him or just play with fine tuning, or to see the effect of some of the multitudinous buttons available.

All the usual controls are there plus many more. For each 'button' on the screen you can use the mouse roller to increase or decrease the effect or choose from a drop down menu.

Hans declares that he still has not actually used every 'button'.

Whether other members will be inspired to try software defined radio for themselves or not, everyone found it very interesting to see.

John Moyle

AHARS also participated as usual in the John Moyle Memorial National Field Day at the property near Swan Reach we have used previously. The club is fortunate that when it was sold another club member bought it and wanted it used for the Field Days.

There were up to 13 of us there at one time or another and all the available HF bands were used for almost the entire 24 hours. Thank you to everyone who contacted VK5BAR.

This time, in response to the request from the Contest Manager we are sending our log in electronically so some time was spent by a couple of people feeding in the information as it came to hand.

We had a father, Russell, bring his still–in-primary-school son up for the whole time of the contest and here is a photo of Patrick VK5FMPJ at the rig where he made 20 contacts with Lesley VK5LOL and Jenny VK5FJAY who guided him.

A good weekend with beautiful weather was enjoyed by all. Those of you who were not there missed out. Sorry. **ar**

Patrick VK5FMPJ at the rig where he made 20 contacts, with Lesley VK5LOL and Jenny VK5FJAY who guided him.

Silentkey

Tony Skerrett VK2FMT

Tony Skerrett passed away, aged 63 years of age, on Friday 26 February, 2010.

Tony had been transferred to a Brisbane hospital from his home in Armidale for pain management, and while in hospital he contracted double pneumonia. With things not looking good he was taken to his brother's residence in Brisbane and with his family present, quietly passed away.

Tony had contracted polio at an early age and had lived the major part of his life on his parent's property at Werris Creek near Tamworth. He was a keen amateur with both satellite and packet stations plus a great HF set up, and attended many Queensland hamfests. When at Werris Creek he used to do the JOTA with groups of scouts and guides coming to the property over the JOTA weekend. Recently he got about in his electric wheel chair, while at a respite hostel.

Although not on air much these past few years due to his medical problems, Tony still took an interest in the hobby. His funeral service was held at The Armidale School chapel on Wednesday 3 March, 2010.

Submitted by Wayne VK2KWM.

spotlight on **SWLING**

Robin L. Harwoood VK7RH

Winter is upon us and propagation has reflected the change of season. I do predict that there will be fewer European stations on the 49 metre broadcasting allocation around our local midday. In years past, signals were easily heard via Antarctica with its distinctive flutter. Sadly there are fewer now utilising this portion of the shortwave spectrum.

That does not mean there will not be signals there. I would not be surprised that some of the remaining, but rapidly disappearing, Latin American domestic broadcasters might be audible.

Radio Sweden will close their external broadcasts via medium and shortwave at the end of October, when the next broadcasting period commences. A web presence will continue. Sweden was one of the pioneers of shortwave broadcasts but their audience over these platforms has significantly declined.

The pesky signals on 7140 from North Korea have gone. The strange thing is that other channels used by the DPRK for external services have also gone silent. Broadcasts in Korean do continue and others have informed me they are hearing some limited foreign language programs from Pyongyang. There is a major clandestine radio war continuing between North and South Korea and Japan. The North has clandestines on 4120, 4470, 3480 and 6250 variable. The South Koreans are on 6003, 6015, 6518 and 6600. Each side jams the other.

Japan has entered this clandestine war, targeting the North. There are over half a dozen separate programs/stations based in Japan and broadcasting in Japanese, Korean and limited English. The Japanese are demanding the whereabouts of 50 to 60 Japanese nationals kidnapped by North Korea and this is the main focus of the programming. One sender is on 9480 at around 1130.

The future of the former Radio Australia site on the Cox Peninsula in the Northern Territory is unclear. An English based evangelical ministry did not renew their lease and all activity ceased on 31 January.

It seems highly unlikely that the Australian Government will resume operations from there and the site will probably return to its native state very quickly. What will happen to the remaining senders. Will they packed up and moved elsewhere or sold? Will the curtain arrays be dismantled or left to rot in the humid tropical air? Some equipment, I believe, has been donated by CVC to HCJB Australia at Kununurra.

All India Radio is coming here very easily on the frequency of 15770 with plenty of Bollywood music. I believe it is aimed for Fiji and Australia. India and China are heavily involved in seeing the DRM+, the HF digital platform, take off. Other international and domestic organisations do not seem too enthusiastic over this mode. Mass production of receivers has not eventuated and there simply is not the audience its proponents were hoping to realise. I understand that New Zealand does use DRM on HF but it is basically a feeder for South Pacific broadcasters.

DRM may be a white elephant.

I noted a signal on 6860 from 2000 to 2200 hours UTC with horrible modulation. It was very difficult to identify, it sounded Arabic. The female announcer was unintelligible, a male announcer was much stronger. It sounded as if the program was recorded in stereo and only one channel was being played. Music was very loud and on the hour identification was obtained. A news broadcast was preceded by a march that is played before the news on Radio Cairo. Certainly an odd channel on which to broadcast to Australasia. You would think they would really care about their modulation and audio but others tell me it is par for the course for Cairo. Is anybody listening?

73 for now de VK7RH. **ar**

GippsTech 2010

This event has a well-recognised reputation as the premier technical conference in VK, with its focus primarily on techniques applicable in the VHF, UHF and microwave bands, especially for weak-signal contacts.

A *Partner's Tour* will be conducted, together with an informal social gathering for dinner on Friday and a Conference Dinner on Saturday.

Saturday July 10
Sunday July 11

Anyone who presented at GippsTech2009 and has not yet forwarded their material for the *Proceedings* volume will receive a reminder from VK3PF very soon!

Further details can be found at the Eastern Zone Amateur Radio Club web site at

http://www.vk3bez.org/

Last call for papers

Amateurs (and other contributors) are invited to submit titles and outlines for topics to be presented at GippsTech2010.

Presentation slots are (5 – 10 minutes) through to one hour. You will need to justify any longer!!

Potential presenters are welcome to contact the Chair of the Organising Committee, Peter VK3PF (vk3pf@wia.org.au), direct for further information or to suggest a topic. **ar**

VHF/UHF An Expanding World

David Smith VK3HZ

vk3hz@wia.org.au

Weak Signal

David Smith VK3HZ

There has been some good tropo propagation in the south, lasting for several days due to the slow moving high-pressure cell.

Bob VK3ZRT in Gisborne reports:

A duct opened VK3 (just west of Melbourne) to VK5 around 5.30 am AEDST on both the 22/3 and 23/3 and stayed open until early afternoon.

On the 22nd, a strong duct also VK5 to Sydney and Canberra - a rarer event apparently.

On the 23rd, a duct very strong VK3 to VK5 and to Leigh VK2KRR. Leigh is still S9+10 at 0100 Z. The Adelaide beacon is there but weak at 0100 Z.

Typical signals S9+40 - 2, 70 and 23 all good.

On 23rd, mid-morning, the Albany and Esperance beacons heard, but no one home.

FM repeaters in Adelaide and Canberra also in use for three-way DX, as well as mobiles VK5 and VK1.

Ian VK3AXH in Ballarat also enjoyed the conditions on the 23rd:

The VK5VF 2 m and 70 cm beacons were quite strong at my QTH being S9 and S7 respectively, which is quite unusual.

My initial contact into Adelaide on 2 m was with VK5BC on 144.1 SSB at 5x8. This was quickly followed with VK5AKK at 5x9. We then went to 70 cm where both stations were worked at 5x3/4 and 5x7. Phil VK5AKK suggested we try 1296 MHz which resulted in my first QSOs on that band into Adelaide at 5x4 followed by a contact with VK5PJ at 5x5. Needless to say there was a level of excitement to have contacts on this band having tried for many years without success. This was followed with contacts to VK3LY at Nhill on 2 m, 70 cm and our first 23 cm QSO.

Other stations worked on 2 m were VK5MWH 5x5, VK5BJE 5x9 VK5NZ 5x5 and perhaps the most interesting was VK5KAA using an FT-817 with 5 watts to a vertical antenna at 5x1.

The conditions seemed to be mainly inland and extended from Adelaide to Eastern Victoria and up into NSW where VK2KRR was quite active. VK3DUT in eastern Victoria was heard by VK5BC but did not quite complete. I was able to work VK3DUT at 5x4 which has not been done for some years.

I also managed to work VK2KRR on 2 m, 70 cm and 23 cm along with lots of other stations. The Esperance 2 m beacon was also being heard over a wide area but unfortunately no one at the VK6 end.

2.4 GHz impromptu Field Day

Mike VK3KH stirred up some microwave activity on Easter Monday. A group email and a posting to the VK Logger resulted in seven people eventually appearing on air. Mike reports:

The weather was fine and the view spectacular from the side of Arthur's Seat. I arrived early and set up 2 metres for liaison and my 2.4 GHz transverter and gridpack antenna.

Things started slowly with 2 metre contacts only for the first 45 mins. I had checked the VK3XPD beacon on 2403.530 MHz, which was 5/9, so I knew my receiver was working, but I was not having much joy.

Then Ross VK3MY in Boronia called me on 2403.150 and we worked 5/7 both ways.

Over the next 90 minutes I worked:

- *Colin VK5DK (5/1 both ways) at The Bluff near Mt Gambier;*
- *Alan VK3XPD (5/9 both ways) in Camberwell;*
- *Rob VK3MQ (5/9 both ways) on Mt Dandenong;*
- *Tim VK3JTM (5/2 and 5/1) on Corn Hill near Ararat; and*
- *Barry VK3BJM (4/1 and 5/1) on Mt Franklin.*

Tim VK3JTM on Corn Hill near Ararat.

Colin VK5DK and company at The Bluff near Mt Gambier.

All stations were worked on 2 metres also, with VK3TPR and VK5LA/p in the Grampians both calling in on 2 metres.

Barry VK3BJM writes:

My son and I left home perhaps a little earlier than the others, and we were up on Mount Franklin, near Daylesford, and ready to go by about 2140 Z (0740 AEST).

The flora on Mount Franklin has grown rather a lot since I was last up there. There was a spot halfway up the crater rim road that was in the clear a couple of years ago - but it is not now! We continued up to the fire tower, at which point bits of horizon could be seen through the upper branches of the pinus and eucalyptus.

Signals on the liaison frequency (144.150 MHz) were all very loud, but not quite so on 2403 MHz. I could not hear the VK3XPD beacon, and the first attempt with Michael VK3KH was unsuccessful. Peter VK5PJ popped up on 144.15, and we exchanged 41 and 51 reports; my 2 m set-up was the halo and 100 W or so, incidentally. About then, Tim VK3JTM and Alan VK3XPD joined us on the liaison frequency; Tim and I then went to 2403.1, whilst Michael and Alan shot off to 2403.15.

Tim and I soon had a contact completed, with signals varying between 52 and 55, with quite a lot of flutter present.

VK5LA/p3 (at the Baroka Lookout in the Grampians) popped up on 144.15, and after a chat on 144.13 I ran my keyer to his 2.4 GHz receiver - sadly, nothing heard; but Andy only had a modified PayTV feed, sans dish, so we were not worried by the lack of a signal.

I then tried with Colin and the VK5DK crew - they were not terribly loud on 2 m, and nothing was heard on 2.4.

I pointed the dish back round to Melbourne, and after a few attempts at listening for keyers, Michael and I completed successfully with 41/51 reports. I heard Alan a couple of times, but did not complete - again, fast QSB was present, but with signals low to start with, readable stuff was in and out of the noise floor. I believe Rob VK3MQ heard me in and out of the noise as well, from his site on Mt Dandenong. Rob ran our path through Radio Mobile, which suggests it was not the easiest at 2.4 GHz!

All in all, a good time was had - this despite the rock thrown up by the cattle truck I was behind as we neared home, which smashed my windscreen! AAMI, pick up the phone!

Cameron - Barry VK3BJM's son - on Mt Franklin.

VK3NX EME Activities

Charlie VK3NX has been busy working the world on the microwave bands via EME during the recent DUBUS EME contest in March. He writes:

It was great to have both moon-passes on the first weekend for the DUBUS contest. Conditions on the 20th were poor for some reason. My echoes were OK but everyone seemed a little down than usual. My moon noise was the same so I figured my receiver was OK. On the 21st, conditions were excellent. Signals

Continued on page 50

WIA Centenary QRP Contest

May QRP Contest 2010

Sponsored by the VK QRP Club, the following contest is designed to encourage interest in the use of low-level power to make contacts during the month of May 2010.

All licensed Amateurs are eligible to participate and are encouraged to do so.

The only limitation is that output power must be kept within QRP bounds of five watts for CW contacts and ten watts for Phone.

Object is to work as many stations as possible during the month of May 2010, operating within a three-hour time slot each evening, then to select your best 20 days of the month as your entry to the contest.

Categories: Open and Foundation Licensees.

Bands: 80 and 40 metres

Modes: CW, AM, SSB

Hours of Operation: 1000 – 1300 UTC daily. (During the last hour, E stations are asked to listen particularly for C and W.)

Exchange RS(T) and Serial Number starting at 001 and incrementing by one for each contact.

Scoring: To make scoring as uniform as possible, we shall use the natural groupings of States as follows --- Eastern E (VKs 4,3,2,7); Central C (VKs 8,5); Western W (VK6), External (VKs 9,0); DX (any call area outside VK).

Contacts within each group score one point per QSO;

Contacts between E and C score two points per QSO;

Contacts between E and W score five points per QSO;

Contacts between C and W score two points per QSO;

Contacts from all mainland areas to External score 10 points per QSO.

Contacts from all VK areas to DX score 20 points per QSO.

Logs should show the name, postal address and callsign of the entrant; callsign of station contacted; exchange; best 20 days of logs as selected by entrant.

Send logs to VK3JS, 121 Railway Parade, Seaford, 3198; or by email to vk3js@zoho.com by 2010, Friday 11 June. (Email is preferred.)(NB Do not forget to include your postal address, as you cannot know if you may be a winner!)
Certificates will be available to the highest scorers in each State in each Category and Mode for best 20 days.

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heard were very loud. At my end I had the same weather for both days with almost clear blue skies so I cannot see why there was such a difference. My echoes seemed much louder on the 21st and I saw my highest moon noise ever on 3.4 GHz - 0.58 dB.

Running a "lonely outpost" on 3.4 GHz from VK, many people's windows to VK are out of the "peak activity times" by several hours. Thankfully, many took the time to come on and work me during my windows. Unfortunately I did not get to operate much into the North America window because of family commitments but on the 22nd, out of the contest period, I was able to be around for my moonrise and work a few stations in NA with excellent conditions as well.

Here is my report of stations worked:

20th - OK1KIR, OK1CA, OH2DG, OZ6OL, G3LTF

21st - DL4MEA, PA0BAT

22nd (out of contest) - WD5AGO, K5GW (CW and SSB), WW2R

Unfortunately I missed (not heard or not complete) OK1DFC, DL1YMK, LX1DB, HB9JAW and VE6TA.

Of particular interest, while trying to pull out a call through the QSB, I sent QRZ several times and was having a lot of difficulty when I finally heard: DDDDD LLLLL 4444 MMMM EEEE AAAA ... This technique has been spoken about before and I thought I would just comment that Gunter's technique of responding in this manner helped immensely and I got his call immediately. I know that this may actually be confusing with some call signs but if each character is repeated enough it becomes self-evident. I am sure that those with callsigns that may be an issue with this method already know who they are and would refrain, but I doubt that there would be many. Gunter and I completed very quickly after this.

VK3UM Program Updates

Doug VK3UM has been at work again, updating his excellent set of programs.

The VK3UM EME Calculator Version 7.02 has been further enhanced with a number of changes. It now also includes a data file for the Arecibo facility for all to wonder – very appropriate given the recent very loud EME signals from there!

The VK3UM EMR Calculator Version 6.44 has had some minor bug fixes.

Finally the VK3UM Planner 2009 has also been updated.

All software is available from:

http://www.sm2cew.com/ or http://www.ve1alq.com/downloads/software/vk3um.htm

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au

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Wireless or radio

Jim Linton VK3PC

When it was a mere scientific oddity, following on from the demonstration of Hertzian Waves by the German physicist Heinrich Hertz, the main means of rapid communication was the telegraph. So naturally this new wire-less communications medium also used Morse code in what was called wireless telegraphy.

The British are attributed with shortening it simply to 'wireless' which continues in common use today, even more so with the wireless technology in many industrial and consumer product applications.

In this the centenary of organised amateur radio in Australia it is appropriate to reflect on the name Wireless Institute of Australia. It clearly stems from our heritage. In the 1980s there were however some WIA members, including a few in administrative roles, who began to consider whether the image of the Institute was being harmed by the retention of the word 'wireless'.

Several off the top of the head alternative names were suggested, all now forgotten by the passage of time but even the word 'institute' was being questioned.

So where did the word 'radio' come from?

French inventor and physicist Édouard Branly (http://www.bing.com/reference/semhtml/%C3%89douard_Branly) coined the word radioconductor in 1897.

It was based on the verb radiate or in Latin 'radius' – which means spoke of a wheel, beam or ray of light. He invented the Branly coherer, a widely used detector of wireless signals until replaced by the vacuum tube or valve.

The word 'radio' appeared in the proceedings of the Convention Radiotelegraphique or International Wireless Convention, Berlin, in 1906.

Soon after, in an article by valve inventor Lee De Forest, the US Navy was an early adopter of it and it was commonly used when the first commercial broadcasts began in that country.

In addition, 'radio' had entered a number of Asian and European languages while British Empire countries more often, at least initially, retained the word wireless.

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Silentkey

John Harris VK5ASN

Dear Sir,

It is with regret that I have to advise you of the death of long time radio amateur Mr. John Harris VK5ASN.

John had been ill for some time, but always put on a brave face.

His original call sign was VK5FD, but he had to drop out for a number of years, and came back later under the VK5ASN call sign.

John and I worked together on a project last year, and although he was unwell, he worked well and we got on well together.

John died in the Mount Gambier Hospital on 17 March in his 80s . He is survived by his wife Coral and two daughters Marilyn and Julie.

Yours faithfully,

John A Sheard VK5JA.

Digital DX Modes

Rex Moncur VK7MO

2 Metres FSK441

Welcome to Darrell VK2BLS and Mark VK2AMS who have been joining in the weekend Activity Sessions. Also to Col VK4CC who is setting up to use WSJT.

1296 EME JT65c

There is an active group of three VK amateurs on 1296 EME using JT65c most times when the moon is up: Dave VK2JDS, Phil VK4CDI and Rex VK7MO. Skeds can be arranged on the HB9Q logger at http://hb9q.ch/joomla/index.php 50 watts and a two to three metre dish is sufficient to work similar stations. Ian VK3AXH is close to being operational so we should soon have a strong VK presence.

Comparison of ROS and Weak Signal Communicator (WSC) with WSJT modes

With the advent of ROS and WSC* it is useful to explore their performance in relation to the WSJT modes of JT65a and WSPR. Figure 1 below compares the various modes in a steady signal test using a signal generator with reference to the noise in the WSJT reference bandwidth of 2.5 kHz.

* WSC is an experimental mode and it is not intended for public release at this stage.

It is seen that both ROS and WSPR have a 3 to 4 dB advantage over JT65a's standard or Kotter-Vardy decoder which is consistent with the fact that they take around twice as long to transmit a typical message of two callsigns and a report. The JT65a Deep Search decoder gains 4 to 5 dB over the Kotter-Vardy decoder by limiting decoding to a restricted set of callsigns in the same way that prior knowledge of a callsign using traditional modes produces an advantage.

WSC was written by David VK3HZ for optical communications. The 3.8 mHz version uses 3.8 mHz bins and was used by Rex VK7MO and Joe VK7JG to cross Bass Strait using cloudbounce in 474 THz. This version gains over 20 dB compared to WSJT's Kotter-Vardy decoder but takes some 20 minutes to send two callsigns. While it has not been tested, it is likely that a 100 mHz version could be useful for VHF tropo-scatter and would allow two callsigns to be transferred in less than a minute and gain around 4 dB over WSJT's Deep Search Decoder. It is also possible to use WSC in a Deep Search mode to gain a further 3 to 4 dB. One of the reasons for WSC's performance is that it does not, like all other modes, spend around half the time sending information to synchronise with the time and frequency of the transmitter but instead relies on precise time and frequency deriving from GPS. The use of 100 mHz bins at 144 MHz requires a stability of better than one part in 10 to the 10th which would require high quality double oven GPS disciplined oscillators at both ends. It also requires the energy due to propagation to be constrained to within 100 mHz which is generally the case for 144 MHz troposcatter. The mode is unlikely to be useful on EME due to libration spreading which can be several hundred mHz on two metres and the need to accurately correct for Doppler shift.

Another way of comparing the various modes is to take account of the actual information content and the time taken to transfer this information and compare this to the Shannon limit. Figure 2 shows the Shannon limit for each mode and how close to this limit each mode gets when achieving 90% error free decoding. **ar**

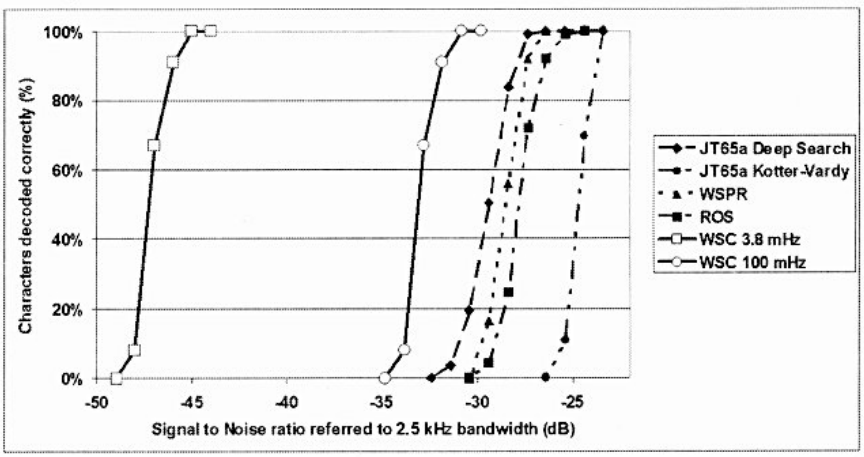

Figure 1: Performance of Various Weak Signal modes.

Mode	Bin-width (Hz)	Time to send Message (seconds)	Infor-mation content bits	Shannon Limit (dB)	Sensitivity at 90% correct decoding (dB)	Close to Shannon Limit (dB)
JT65a Kotter-Vardy	2.9	48	72	-33.8	-24.2	9.6
JT65b Deep Search	2.9	48	14	-40.9	-28.3	12.6
ROS	1	90*	94	-35.4	-27.0	8.4
WSPR	1.5	110	50	-39.0	-27.7	11.3
WSC 3.8 mHz	0.0038	1200	56	-48.9	-46.4	2.5
WSC 100 mHz	0.1	48	56	-34.9	-32.4	2.5

Figure 2: Shows how close the various modes get to the Shannon limit.
** Assumes that no stop frame is required.*

DXnews & views

John Bazley VK4OQ

E-Mail: john.bazley@bigpond.com

The upcoming **3C0C Annobon Island** expedition that was scheduled for late April or early May has been postponed. Recently the group was informed by the Government of Equatorial Guinea that runway repairs on Annobon will mean there will be no flights in or out for maybe two or three months. Consequently, the operation is being delayed pending completion of this work. The planners say flying is the only practical way to go. The team does not consider reaching the island by ship, because it is "difficult, slow and without regularity". So it is just a case of waiting for some more definite information. To keep track of what is happening, you can get up to date news from www.3c0c-annobon.com

The dates for the **E4X Palestine DXpedition** have now been announced, 28 May to 6 June. The team of EA5RM, EA5FX, EA7KW, F6ENC, IN3ZNR, EA2RY, EA7AJR, F5CWU, F9IE and UT7CR will be active on all bands from 6 metres to 160 metres with three stations always active. QSLs will be handled by EA5RM.

Chris VK3FY has obtained permission from the Philippines to operate from Spratly for three-weeks in January, 2011. They will be on **Pagasa Island AS-051** with the call DX0DX. Chris wants to add some good CW and phone operators to join him. If you are interested please contact him at vk3fy@iprimus.com.au

After 16 months of planning, K3LP and YT1AD are cancelling their plans for an expedition to **T31 Central Kiribati**. They had planned on having six stations on HF and two on satellites and VHF/UHF with a goal of 100,000 QSOs, using their 2006 N8S Swains Island operation as a model. They decided to cancel when they saw the announcement of the upcoming T31X operation planned for this June, four months earlier than their planned trip. David and Hrane will be looking for a different location for a future trip. Hrane says the cancellation is causing them to forfeit their $40,000 cash deposit for the boat to Canton Island.

Details of the T31X, taken from their Web site is:

Ukrainian DXpeditioners Team (UDXT) is very glad to present our new project – PACIFIC ODYSSEY 2010.

UDXT members, namely: Sergey UX0HX, Team Leader, Oleg RK3FA, Alex UT5UY, Yuriy UT1HF, Oleg US7UX, Leo UR3HR and Yuriy Grushevskiy SWL will be active on all bands , all modes as:

5W0OX Samoa (IOTA OC – 097) 18 May to 19 May 2010;

T31X Central Kiribati (IOTA OC – 043) 22 May to 1 June 2010;

ZK3X Tokelau (IOTA OC – 048) 2nd June to 6th June 2010;

The main mission of this DXpedition is activating **T31 Central Kiribati, Kanton Island,** Phoenix Islands Group. This DXCC entity is ranked #7 in EU and #19 in World's Most Wanted List. The next goal is activating **ZK3 Tokelau Islands**, which is ranked #29 in EU and #35 in World's Most Wanted List. For more information please visit DXpedition WEB site: http://www.uz1hz.com/pacificodyssey.html

If you remember, last year there was quite a lot of talk about possible new entities in the **Dutch Antilles** in 2010. Well, W8GEX and his co-leader, AA4NN have announced that they intend operating from **St. Eustatius** this coming Autumn in anticipation of the dissolution of the Netherland's Antilles. Their plans call for a 10-day operation with a international crew of at least four stations operating continuously while they are there.

A permanent beacon has been active from the Russian Antarctic station Bellinghausen on **King George Island**, South Shetlands, since 8 March with the callsign R1ANF. The beacon consists of an IC-706, AT-180 antenna tuner, a switching power supply, a PROCOM HF-5000 vertical antenna and a GPS synchronized controller. The beacon is working on 14101.0 kHz and transmits the following message every full minute: "VVV R1ANF ANTBEAP R1ANF AR" (carrier signal reduced in a similar manner to the NCDXF beacons, starting with 100 watts).

Another beacon is ready to be installed at Novolazarevskaya Station and will be active on the same frequency using the callsign R1AND. They are part of the Antarctic Beacon Project (ANTBEAP) to explore wave propagation in the Antarctic region. Reports would be appreciated and should be sent to Dominik DL5EBE.

Larry VQ9LA plans to depart the **Chagos Islands** in December of this year. Effective 15 April 2010, his new QSL route is via N0QM, Larry Arneson, 705 Rhodes Ave, Grandview, MO 64030, USA. QSL cards sent to his FPO Box will get through to Larry until the end of this year. Larry is hoping to get all the mail going in the right direction before he heads home.

Nicola I0SNY reports he will be active as **BY1DX/I0SNY from Beijing** between 25 April and 16 May. He will focus on 40 and 17 metres. QSL via I0SNY (direct only).

Reid N0RC says he will be active in spare time as either OX3RC or OX3/N0RC from **Thule, Greenland (NA-018)** again from May 1 to 27. He is going to Thule with NASA's Operation Ice Bridge. QSL via home call.

Neil V73NS (WD8CRT) will be going QRT from **Kwajalein (OC-028),** Marshall Islands in late March. His next work assignment will take him to Afghanistan, starting around late April or early May. Note that the new QSL route for V73NS is now via W3HNK.

Laci HA0NAR reports an online log search is now available for his **African DXpeditions (6W/HA0NAR,** 6W/HA0NAR/P (AF-078) and J5NAR) at: http://cqafrica.net/en/radio/online_log/index.html He is waiting for his QSL cards to be printed. Laci expects QSL cards via the bureau or direct. His direct policy is an SAE (self addressed envelope) a new IRC or at least two US dollars to cover postage.

All others will go via the bureau.

ZS8M on **Marion Island** is set for the end of April. Operator Pierre ZS1HF says "Sorry, no CW." He will do SSB and digital modes. Pierre is being sent to the island for a year to work as a radio and (other) electronics technician. He is currently busy with "technical and team training", including maintenance of weather monitoring gear, the hydrogen electricity generator, fire fighting, cooking and first aid. His ship from Cape Town bound for Marion departed on April 8. It is about a six-day voyage. Unloading and scientific work is expected to take four weeks. His operating should then commence.

Daniel DL5YWM will be in Peru between 20 March and 15 May. He plans to operate in his free time as **OA4/DL5YWM from Lima**; side trips to different call areas are possible, as well a "last minute" operation from an island.

Phil F4EGS is heading back to **Chad** for a two month work assignment beginning April 10. At the moment he does not know if he will use his old TT8BK, as he did the last four times he was there. Look for him on 7 through 28 MHz on SSB and CW and some RTTY in his spare time. He will be running an FT-850 into an R7 vertical. QSL via F4EGS either direct (QRZ.Com) or via the REF QSL bureau.

Good luck in the pile-ups until next month.

Special thanks to the authors of The Daily DX (W3UR), 425 DX News (I1JQJ) and QRZ.DX for information appearing in this month's DX News & Views. For interested readers you can obtain from W3UR a free two-week trial of The Daily DX from www.dailydx.com/trial.htm

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Rob GM3YTS operating during the recent S79GM trip.

2010 Ross Hull Memorial VHF-UHF Contest Results

Contest manager: John Martin VK3KM

Activity in this year's contest was again far less than hoped for. After the 2009 test run of a scoring system based on Maidenhead locators, the comments received indicated that the scoring system should revert to the traditional distance-based scoring, so as to allow the scores to fully reflect achievement in making DX contacts. The change was made for this year's contest, but unfortunately it did not lead to increased activity.

The other change made this year was to relax the scoring restrictions on 6 metres, by doubling the band multiplier and removing the scoring cap on sporadic E contacts. This brought about some increase in 6 metre activity, but it did not flow through and stimulate more activity on the higher bands. The aim of the scoring system has been to keep the scoring potential of all bands approximately equal, but at present they are quite unequal. The 6 metre scoring will be reviewed, especially as the solar cycle develops, but the most desirable fix for the scoring inequality would be an upsurge of contest activity on 2 metres and higher bands.

How to achieve this is still not clear. It is not difficult – one whole month in which to make DX contacts, but the scoring is based on up to seven contest days. Many entrants have achieved excellent scores while operating for less than seven days.

Congratulations to this year's winners, Ted Thrift VK2ARA and Rex Moncur VK7MO. Also noteworthy is the top scoring entrant on 2 metres, Stephen Hayman ZL1TPH, and Gavin Brain VK3HY for achieving the top scores on 432 and 1296 MHz.

Call	Name	50 MHz	144 MHz	432 MHz	1296 MHz	TOTAL
Section A: All Bands						
VK2ARA	Ted Thrift	2638	108	85	-	2831
VK3HY	Gavin Brain	646	252	310	256	1258
VK2AH	Brian Farrar	796	126	65	-	987
ZL1TPH	Stephen Hayman	-	300	-	208	508
VK2TG	Robert Demkiw	254	147	85	-	486
VK6ADI	Barrie Burns	289	129	-	-	418
VK5FMPJ	Patrick Morgan	6	-	-	6	
Section B: Digital modes, All Bands						
VK7MO	Rex Moncur	-	530	-	-	530
VK5APN	Wayne Pearson	-	525	-	-	525
VK3HY	Gavin Brain	-	432	-	-	432
VK1WJ	Waldis Jirgens	-	165	-	-	165

AMSAT

David Giles VK5DG

vk5dg@amsat.org

Using SatPC32 under Linux

AMSAT-VK

This month I present notes of experimenting with using the popular Windows satellite tracking program SatPC32 under the Linux operating system. The end result is not a perfect implementation but is quite usable. Also the AMSAT-VK information section has been updated with the new repeaters in VK7.

SatPC32 is written by Erich Eichmann DK1TB who has kindly donated it to AMSAT. All proceeds from the sale of SatPC32 support AMSAT. Briefly, SatPC32 can graphically display up to 12 satellites simultaneously, adjust modes and frequencies for most popular radios in use with satellites and work with many antenna controllers.

This article concentrates on installing SatPC32 under Linux and an example implementation that I have currently running. I will begin with a description of the example hardware and software. The computer is a Toshiba Satellite (how apt) M100 laptop with a 1.7 GHz processor and 2 GB of RAM. It does not have any built-in serial or printer ports so it uses USB adaptors to communicate with the radio(s) and antenna controller. The USB to RS-232 serial adaptors are Prolific PL2303 types. I am not advocating Prolific adaptors over other brands, they are just what I have at hand. Linux supports many brands of USB hardware, often using a generic driver. The current version of SatPC32 is 12.8a. The full version of SatPC32 can be downloaded from Erich's website [1]. The unregistered version is fully functional except that you have to enter your latitude and longitude each time you use it. I purchased a registration from AMSAT-NA and they sent a CD. The Linux distribution used for this example is Debian version 5.0 and uses the default Gnome window manager. Debian can be found at www.debian.org and is the basis of Ubuntu and various other Linux distributions. The information given in this article should be applicable to many other Linux and Un*x operating systems.

Windows programs cannot directly run under Linux. To fix this problem an intermediary program is used called WINE [2]. WINE liaises between Windows programs and the Linux operating system. It is an implementation of the Windows Application Programming Interface (API). It can be configured as any 16 or 32 bit version of Windows. Many Windows programs run fluently under WINE, some do not run at all and others run with varying degrees of success. SatPC32 falls into the latter category but the problems are minor. WINE is open source and is often included in popular Linux distributions. The version used in this example defaults to mimicking Windows XP, but this can be altered using the WINE configuration tool.

Installation

For this example, the user's name is David and his home directory is at /home/David. WINE is installed to /home/David/.wine. WINE sets up two directories; /dosdevices contains links to hardware devices and /drive_c is the equivalent of Window's C:\ directory. Linux uses the '/' to separate directories instead of '\'.

Once you have the SatPC32 files, either from the CD or unzipped from the download, go to the directory they are in and type at the prompt wine setup.exe. WINE will put the program files in /home/David/.wine/drive_c/Program Files/SatPC32 and the data files depending on the WINE settings for the version of Windows in use. SatPC32 version 12.7 and above place the data files in different locations according to the version of Windows used. For Windows Vista the data files are in .wine/drive_c/Program Data. For Windows98/ME, the data files are in .wine/drive_c/My Documents. For Windows XP the data files are in .wine/drive_c/windows/profiles/David/Application Data/SatPC32. These are not necessarily the same under all versions of WINE and Linux, so some searching may be needed.

If WINE is setup properly it will put an icon on the desktop and a set of menu entries. For the Gnome window manager the menu entries will be at Applications->Wine->Programs->SatPC32.

When running SatPC32 for the first time you may see on the graphic display that some of the numbers are in the wrong places. One cause of this is that SatPC32 cannot find the fonts it needs. The original setup of WINE on my laptop has a selection of fonts in the /usr/share/wine/fonts directory but was empty in the .wine/drive_c/windows/Fonts directory. A simple method is to copy the fonts from a PC running Windows (c:\WINDOWS\Fonts) into both fonts directories.

This improved the graphic display, especially the bottom lines with the current satellite's position readout. Refer to Figure 1. The main graphical display shows AO-07 getting closer to my QTH. The countdown window to the right shows the times and maximum elevation for the twelve satellites I have selected. The SatEl window upper right should show the full server window for the SatEl rotator driver – more on this later.

Setting up COM ports for WINE.

On a 'standard' PC the serial ports are designated COM1 and COM2 under Windows. Linux treats everything as files and I/O ports are no exception. The port equivalents under Linux are COM1 is /dev/ttyS0, COM2 is /dev/ttyS1. WINE does not configure these automatically so you need to

add some symbolic links. From the console go to the /.wine/dosdevices directory (from the command prompt type cd /home/David/.wine/dosdevices). The syntax for adding symbolic links is ln -s /dev/<device> comX where <device> is the Linux port filename and comX is the Windows comport you want to link it to (X is a value between 1 and 15). For example to put /dev/ttyS0 to COM1, type at the prompt ln -s /dev/ttyS0 com1. To use USB serial adaptors the filenames are /dev/ttyUSBx where x is the number of the adaptor (starting at zero). Other versions of Un*x may use different filenames. One quirk of this is that you can setup any hardware port to any COM value. For the example laptop with two USB-RS-232 adaptors the following links were setup in the /.wine/dosdevices directory:

ln -s /dev/ttyUSB0 com1

ln -s /dev/ttyUSB1 com2

Printer ports are setup in a similar way. LPT1 under Linux is usually designated /dev/lp0 or /dev/usb/lp0 for USB adaptors. However I have not had any success in getting SatPC32 to work successfully with either a motherboard printer port or a USB to printer adaptor. If you are using a printer port interface such as the FODtrack, you may be out of luck. Rotator controllers using serial ports are fine.

The serial ports can be tested before connecting the radio(s) or antenna controllers. I used a NULL modem cable with just the TxD, RxD and GND pins connected [2]. One end is connected to the USB serial adaptor, the other to another PC (or the same PC and another serial port) running a serial terminal program (e.g. Hyperterm for Windows or GTKTerm for Linux). To test the radio setup I selected a Kenwood TS-790 since it has a fixed baud rate of 4800 and the commands sent to it are readable ASCII. Pressing the 'C-' button to start the CAT (Computer Aided Transceiver) control

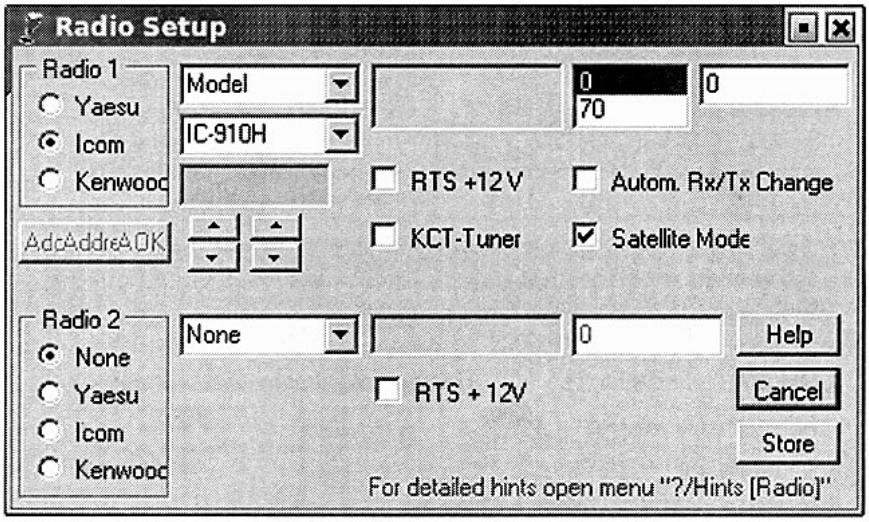

Figure 2: Radio Setup window under Linux.

AMSAT-VK

AMSAT Co-ordinator
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group.amsat-vk.org

About AMSAT-VK
AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial Amateur Radio satellites. Many of our members also have an interest in other space based communications, including listening to and communicating with the International Space Station, Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft.

AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly net
Australian National Satellite net
The net takes place on the second Tuesday of each month at 8.30 pm eastern time, that is 0930 Z or 1030 Z depending on daylight saving. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales
VK2RMP Maddens Plains repeater on 146.850 MHz

VK2RIS Saddleback repeater on 146.975 MHz

VK2RBT Mt Boyne Repeater on 146.675 MHz

In Victoria
VK3RTL Laverton, Melbourne, 438.600 MHz FM, 91.5 Hz CTCSS tone access

In South Australia
VK5TRM, Loxton on 147.125 MHz

VK5RSC, Mt Terrible on 439.825 MHz IRLP node 6278, Echolink node 399996

In Tasmania
VK7RTV Gawler 6 m. Repeater 53.775 MHz IRLP node 6124

VK7RTV Gawler 2 m. Repeater 146.775 MHz. IRLP node 6616

In the Northern Territory
VK8MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT-NA or VK3JED conferences. The net is also available via IRLP reflector number 9558. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email. Frequencies and nodes can change without much notice. Details are put on the AMSAT-VK group site.

Become involved
Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm. These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night.

Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

should send some configuration commands to your terminal. If you want to try a Yaesu radio then make sure your serial terminal software can display hexadecimal characters or it looks a mess. Setting up the radios is covered in the excellent documentation supplied with SatPC32. The only problem encountered in this example was the text missing for the comport and CAT delay. This can be seen by scrolling your mouse over the blank space (see Figure 2 previous page).

Setting up rotators

The ARS, Hallorotor, WinrotorXP, Winrotor32, FODtrack, RifPC and IF100 interfaces all use the printer port and will not be described here. The Egis, SABREtrack, SatEl, W0LMD, Prosistel and Yaesu GS-232 (and clones using the SDX driver) rotator controllers use a serial interface and have been tested with the Null modem method described above. SatPC32 uses separate driver programs for the rotators. Unfortunately they do not appear on the screen as they would under Windows, see Figure 1.

Figure 3 shows a typical Windows rotator server and its configuration window underneath. Since you cannot get to the Setup button to start the configuration window it presents a bit of a problem. The method I have used is to manually edit the parameter file for the rotator in use. These can be found in the data directory. Using the SatEl rotator as an example, the files are found in the /Application Data/SatPC32/SatEl directory. SatElParam.SQF has the parameters. The first number is the serial port used for the rotator. The second number is the baud rate. RotServPos.SQF just holds the X/Y position of the window and is not important here. The other rotator serial port parameter files are similar but may have extra parameters.

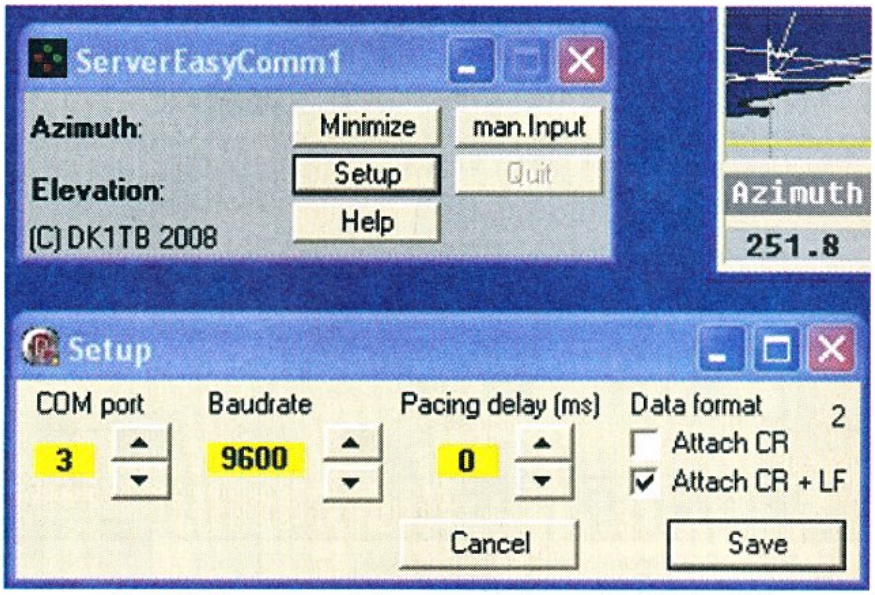

Figure 3: Easycomm rotator server window under Windows XP.

Other programs in the suite

SatPC32 has several other programs

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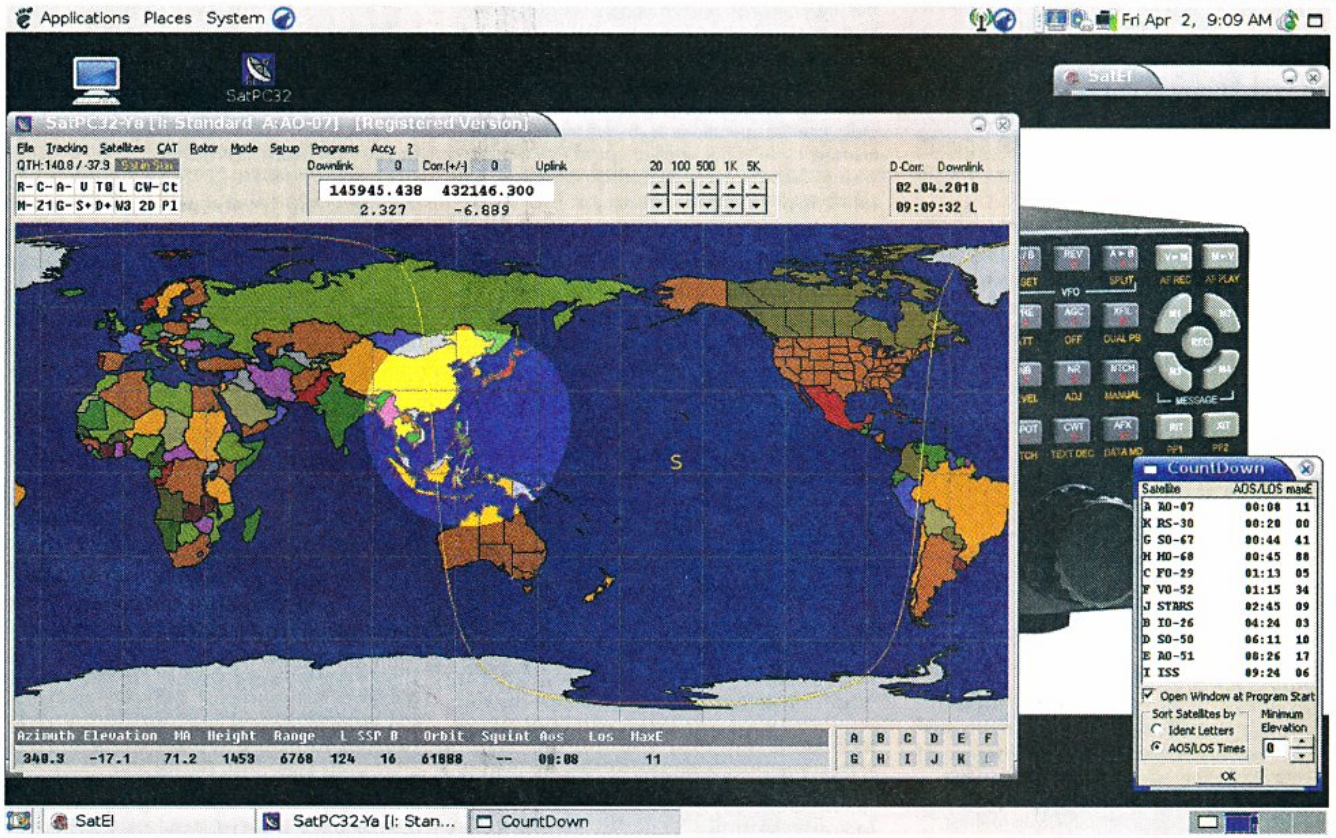

Figure 1: SatPC32 on Gnome desktop.

AMSAT-UK

FUNcube at UKSC 2010

The United Kingdom Space Conference was held from March 24-28 in Godalming Surrey. This premier event always attracts a stellar cast of speakers and this year was no exception. The launch of the UK Space Agency in the same week added to the excitement. Many of the presentations are available for view from the Ustream server.

AMSAT-UK attended to explain their exciting plans for the FUNcube satellite. As well as the Amateur Radio SSB/CW transponder FUNcube will provide an in-orbit tool for science education outreach and hands-on training in space and all the STEM subjects (Science Technology Engineering & Mathematics). The telemetry system is designed for easy reception by school pupils using extremely simple hand held VHF receive equipment connected to a PC soundcard or USB port.

The satellite contains a materials science experiment and pupils will be able to receive the results direct from space and compare them with similar reference experiments in the classroom.

The FUNcube stand at the conference included a mock-up of the new satellite and a demonstration of the telemetry. FUNcube is expected to be launched in early 2011.

Michael Castle G1ZVN gave a short introduction on FUNcube during one of the education sessions and FUNcube was also featured in a presentation on the UK National Cubesat project.

During the five days over 1000 people attended the event and the concept behind FUNcube was well received.

There will be more demonstrations of FUNcube at the AMSAT-UK International Space Colloquium to be held in Guildford from July 31 to August 1.

AMSAT-UK publishes a colour A4 newsletter, OSCAR News, which is full of Amateur Satellite information. Join online at

https://secure.amsat.org.uk/subs_form/

FUNcube: http://www.FUNcube.org.uk/

AMSAT-UK: http://www.uk.amsat.org/

Ustream Server: http://www.ustream.tv/channel/uksc-2010

AMSAT Australia continued

included. I have not spent as much time with these but here is a brief summary of each. They all appear to work properly under Linux except for any changes found below.

SatPC32ISS is a special version of SatPC32 that is tailored for transponders using one band. This includes the International Space Station and PCSAT (NO-44). It appears to run under Linux as well as SatPC32.

SuM is a simple tracking program that will point your antennas at the Sun or the Moon. It works with the same rotator setup in SatPC32. Use the quit button to end the program rather than the close window button on the title bar so that the rotator server is closed properly.

SumListen lists times, azimuth and elevation positions of either the Sun or Moon. I have not tried the print option. You have to setup your latitude and longitude.

WinAOS generates lists of upcoming satellite passes for a selected group of satellites. Ideal if you want a paper copy of pass predictions to take on a trip without taking the computer with you.

WinListen32 generates lists of upcoming passes for a single satellite but between two ground stations.

Wisat32 tracks satellites the same as SatPC32 except it does not have the graphic display and it has restrictions on the types of radios it can control.

The DDE programming examples using Delphi and Visual BASIC to display message strings from SatPC32 may not automatically update. Clicking the Open Link button will update the message.

Final Pass

Presented here is how I got SatPC32 running under Linux on my laptop. While it is not perfect, it is quite usable. I have successfully used it to control my FT-817 and rotator to receive plenty of satellites. It can be trialled for free. Apart from the fonts, printer ports and configuration windows, I have one desktop PC that changes all the screen colours on the graphics display after ten seconds. As they say on the Internet, YMMV (your mileage may vary).

References

[1] http://www.dk1tb.de/indexeng.htm

[2] http://www.winehq.org

[3] http://en.wikipedia.org/wiki/Null_modem

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Contests

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CONTEST CALENDAR

May	**All**	**WIA Centenary QRPContest**	**CW/SSB/AM**
	1-2	ARI Italian Contest	CW/SSB/RTTY
	8	**Trans Tasman 80 m**	**SSB**
	8-9	Alessandro Volta DX Contest	RTTY
	8-9	CQ-M International DX Contest	CW/SSB
	15-16	King of Spain	CW
	22-23	EU PSK DX Contest	PSK
	22-23	Baltic Contest	CW/SSB
	29-30	CQWW WPX Contest	CW
June	5-6	SEANET Contest	CW/SSB
	12-13	**VK Shires**	**CW/SSB**
	12	**Trans Tasman 160 m**	**SSB**
	19-20	**Winter VHF/UHF Field Day**	**CW**
	19-20	All Asia DX Contest	CW
	26-27	King of Spain	SSB
	26-27	Ukrainian DX DIGI Contest	PSK/RTTY

I am writing this a couple of hours after finishing the WPX SSB contest, so if you find any random characters in this article, then obviously I have fallen asleep and my head has crashed onto the keyboard.

I operated the maximum allowed 36 of 48 hours and that translated to around 8 hours sleep in total over those two evenings. Fortunately there was an opening to somewhere all the time to help keep me awake. I was tempted to take a break after 15 m closed to USA at 0100 UTC on the second day, but there was now propagation to North America on 20 m and could I raise any new Asia/Oceania contacts on 15 m/20 m?

But a few CQs on 10 m raised a little JA pile up to get me through. By 0500 UTC I was REALLY sleepy but then 20 m exploded on the long path to Europe and I plodded away until my next scheduled rest at 1500 UTC.

With just 100 W and an average system, I spent most of my time search and pouncing, but still ended up with 614 QSOs and I had a lot of fun. The 10 m opening to Europe on the Sunday night was fun and when a TY Benin station called me during my CQ run I almost fell off the chair!!!

2010 VK/trans-Tasman Contests

Rules

The Contests are open only to all VK and ZL operators.

The Contests shall be in 6 X 1 hour stages (best 5 hours to count) and stations can only be reworked after the commencement of each hour. However, stations worked during the 5 minutes before the hour, cannot be reworked until 5 minutes after the hour.

I hope to get on the air at some stage for this to give out the much needed VK8 multiplier for this event.

Exchange – Sequential numbers commencing at 001 shall be given and received for all contacts made during the Contest. (Use of RST numerals is NOT required).

QSY rule – It is not in the spirit of the Contest to "park" on a frequency.

While this will not be policed, 20 minutes is considered to be the maximum time between QSYs, and 10 kHz the minimum frequency shift.

I operated in this contest from VK5 last year and I noticed some stations that always stayed on the same frequency. I know one VK1 stayed on one frequency and never moved. I remember this because I could easily get the VK1 multiplier by going to the same frequency every hour.

Date – 80 m SSB on Saturday May 8 and 160 m SSB on Saturday June 12.

Time – 0800-1400 UTC.

Frequencies – 80 m on 3535 to 3620 kHz and 3640 to 3670 kHz. 160 m on 1835 to 1875 kHz.

Power – maximum power allowed is 100 W for all non-QRP entries.

Categories – 80 m Phone, 80 m QRP Phone, 80 m Foundation Phone, 80 m Phone Multi. 160 m Phone, 160 m QRP Phone, 160 m Phone Multi.

Scoring – The scoring system is quite involved because it compensates for geographical location. So it is best to visit www.wia.org.au/members/contests/transtasman/ to obtain a full run down of the rules.

The 2010 Australian Shires Contest

Starts: 06.00 UTC Saturday, June 12, 2010

Ends: 06.00 UTC Sunday, June 13, 2010

Contest Period: 24 hours for all stations, all categories.

Objectives: The objectives of this contest are for amateurs around the world to contact as many VK shires as possible in the contest period. i.e. VK amateurs are to work the world including VK, whilst the rest of the world can only work VK.

Bands: 80 metres 3.500 - 3.700 MHz, 40 metres 7.000 - 7.250 MHz, 20 metres 14.000 - 14.300 MHz, 15 metres 21.000 - 21.350 MHz, 10 metres 28.000 - 28.600 MHz. Please note there is no 75 m DX window permitted for VK stations which means the rest of the world can operate above 3.700 MHz. i.e. split operation.

Modes: SSB and CW only.

Categories:

1. VK Single – OP All Band Rover: Single operator(s) must do all contest related things by themself.
2. VK Multi – Two All Band Rover: Is 2 or more operators with maximum of two transmitted signals at any one time. This category MUST USE Software CONTEST LOGGERS. All operators must be fully listed when the log is submitted.
3. VK Single Op All Band..... same conditions as number 1 above
4. VK Multi – Two All Band.... same conditions as number 2 above
5. VK Single Op Foundation: Is a VK Foundation licensee who must do all contest related things by themself.
6. DX Single Op—All Band..... Is a single op who must do all contest related things by themself.

For all categories: Transmitters and receivers for a fixed station must be located within a 500 metre diameter circle or within the property limits of the station licensee's address, whichever is greater. If you are a member of a multi op team you can not partake in the contest as an individual in any way. Please note that you are permitted to have up to two transmitted signals going simultaneously. All contest operation must be within operator's licence restrictions and conditions, e.g. power output, bands used, etc. Single OP stations are only permitted one transmitted signal at a time. No operator is permitted to use more than one call sign for the entirety of the contest.

A Rover station is a VK station who goes either portable or mobile for the entire contest. Please note that all portable equipment can not be set up prior to the Friday preceding the contest and no earlier than at 0001 UTC. The Rover who moves into a new SHIRE may count the same MULTIPLIER more than once per band as long as the Rover is in a new SHIRE location. Such change in location must be clearly indicated in the log. i.e. A Rover station becomes a new QSO to the stations working them when that STATION changes SHIRE locator. Please note that in all categories below you may change band and mode as often as you like. You may also work the same station multiple consecutive bands/modes one behind the other: e.g. work VK4FW on 20 m SSB then QSY to 15 m CW then QSY to 80 m CW then QSY to 40 m SSB etc.

Exchange: All VK operators to exchange callsign, RST followed by the VK shire abbreviation as per the official list provided: e.g. VK4FW 59BU4 or 599BU4. Stations outside VK to exchange callsign, RST followed by CQ ZONE e.g. ZL1AMO 5932 or 59932.

Multipliers: The multiplier is each VK shire worked per band and mode as above as well as each CQ Zone worked per band and mode: NB. VARIATION FOR ROVER STATIONS. ROVERS CAN REWORK FROM MULTIPLE LOCATIONS.

Scoring: One (1) point per QSO. Multiply total QSO points times total number of multipliers worked (i.e. If you worked 33 on 80 m, 43 on 40 m , 16 on 20 m, 21 on 15 m and 5 on 10 m that would be a total of 118).

Example 1: VK4FW works stations as follows:

600 QSOs x 1 point = 600 points

118 VK shires worked + 35 CQ zones worked = 153

600 x 153= 91,800

VK4FW final score is 91,800.

Awards: VK Stations: Certificates suitable for framing will be awarded to the top scoring stations in each category as well as place getters depending on entries received. A minimum of 50 QSOs must be made to be eligible to receive a certificate.

Stations Outside VK: Certificates suitable for framing will be awarded to the top scoring stations in each category as well as place getters depending on entries received for each continent.

** Please note we hope to be able to award a minimum of four certificates per category.

The various categories have been sponsored for the next three years by the following operators (until 2011). We thank them very much.

- VK Single Op – kindly donated by Phil Smeaton VK4KW
- VK Multi Two – kindly donated by Laurie Porter VK4VCC
- VK Single Op Foundation – kindly donated by Nick Hacko VK2DX
- VK Single Op Rover – kindly donated by John Ferrington VK6HZ
- VK Multi Two Rover – kindly donated by Trent Sampson VK4TI
- DX Single Op – as below:
  - o North America – kindly donated by Craig Edwards VK8PDX
  - o South America – kindly donated by Dave Clifford VK4NDX
  - o Asia – kindly donated by Diane VK4KYL and Bill Main VK4ZD
  - o Europe – kindly donated by Andrew Munson VK4HAM
  - o Africa – kindly donated by Tony Hambling VK3VTH
  - o Oceania – kindly donated by Robert Duck VK2VRD

The VK5NJ Trophy: Will be awarded to the station who makes the highest number of CW QSOs during the

contest no matter what category they are in. Please note this has nothing to do with actual points and multipliers, it is strictly the actual number of CW QSOs made.

Most Valued Contester(s): The administration will award this trophy to the person(s) that they feel has done the very best they could for the betterment of the contest. This may be in the form of a club activation of a remote shire for example or a person travelling to the most shires - ultimately it will be to those who the administration feels did the best to add value to a particular year's contest.

Miscellaneous: An operator may sign only one callsign during the contest. This means that an operator cannot generate QSOs by first signing his callsign, then signing his daughter's callsign, even though both callsigns are assigned to the same location. If in fact a fixed VK station is located on the border of more than one VK shire, they must choose only one VK shire from which to operate.

Utilising the various internet DX clusters etc is permitted however ANY FORM OF SOLICITED OR SELF SPOTTING INCLUDING CLUB MEMBERS SPOTTING CLUB OPERATIONS WILL RESULT IN NIL RESULT OF THE LOG. ANY use by an entrant of any non-amateur means including, but not limited to, telephones, email, Internet, Instant Messenger, chat rooms, VOIP, or the use of packet to SOLICIT, ARRANGE, or CONFIRM any contacts during the contest is unsportsmanlike and the entry is subject to disqualification. Aeronautical mobile or maritime mobile contacts do not count. UTC is the required logging time.

Log Submissions: Log entries must be submitted by 1 September, 2010 to be eligible for awards. Submit your electronic log in the Cabrillo format created by all major logging programs. Send via e-mail attachment to contest@vkshires.info

Subject line: Callsign [used in the contest] only. SINGLE OP stations may submit a paper log, only if they make less than 100 QSOs.

VK entrants are reminded to be sure their log indicates their VK shire location. If you go portable or mobile the log must clearly define where you changed location. Click on the "VK SHIRES Web Form" link on the contest website at www.vkshires.info Computer-generated logs must be e-submitted. Callsigns of electronic logs received are posted and updated regularly on the website.

Any queries or enquiries please email vkshires@vkshires.info The Oceania Amateur Radio DX Group Incorporated is very pleased to be able to be associated with this contest by providing the official web site www.vkshires.info

Winter VHF-UHF Field Day Contest

Contest manager: John Martin VK3KM

There has been one major rule change for the next Field Day: the introduction of a separate section for rover stations. This new section will allow portable and rover stations to compete against other stations that have similar scoring potential.

The rover section will apply to all stations that operate from more than two grids, or change location more than twice. This allows stations in the regular Portable sections to change location once, and return to the original grid square, without being required to enter the Rover section.

Dates: Saturday and Sunday 19 and 20 June 2010

Duration

in all call areas other than VK6: 0200 UTC Saturday to 0200 UTC Sunday.

Duration in VK6 only:

0400 UTC Saturday to 0400 UTC Sunday.

Sections

A: Portable station, single operator, 24 hours.
B: Portable station, single operator, 8 hours.
C: Portable station, multiple operator, 24 hours.
D: Portable station, multiple operator, 8 hours.
E: Home station, 24 hours.
F: Rover station, 24 hours.

Operating periods: Stations entering the 8 hour sections may operate for more than 8 hours, and nominate which 8 hour period they wish to claim for scoring purposes.

Entering more than one section: If a portable station operates for more than 8 hours, it may enter both the 24 hour and 8 hour sections. If the winner of a 24 hour portable section has also entered the corresponding 8 hour section, his log will be excluded from the 8 hour section.

If a portable or rover station spends part of the contest period operating from his home station, he may also enter the home station section.

Two operators: If two operators set up a joint station with shared equipment, they may choose to enter Section A or B as separate stations under their own callsigns, or Section C or D under a single callsign. If they enter Section A or B, they may not claim contacts with each other.

Multi-operator stations: Portable stations with more than two operators must enter Section C or D. Operators of stations in Section C or D may not make contest exchanges using callsigns other than the club or group callsign.

Rover stations: The Rover section is for all portable or mobile stations that operate from more than two locator squares or change location more than twice.

General Rules

One callsign per station. Operation may be from any location. A station is portable only if all of its equipment is transported to a place which is not the normal location of any amateur station. Portable stations may change location during the Field Day provided the station is dismantled and reassembled each time it moves. You may work stations within your own locator square. Repeater, satellite and crossband contacts are not permitted.

No contest operation is allowed below 50.150 MHz. Recognised DX calling frequencies must not be used for contest activity. Suggested procedure is to call on .150 on each band, and QSY up to make the contest exchange.

Contest Exchange

RS (or RST) reports, a serial number,

and your four digit Maidenhead locator. The Maidenhead locator is optional if it has already been exchanged in a previous contact during the Field Day and neither station has moved since then.

Repeat Contacts

Stations may be worked again on each band after three hours. If either station is moved to a new location in a different locator square, repeat contacts may be made immediately. If the station moves back into the previous locator square, the three hour limit still applies to stations worked from that square.

Logs

Logs should cover the entire operating period and include the following for each contact: UTC time; frequency; station worked; serial numbers and locator numbers exchanged.

Scoring

For each band, score 10 points for each 4 digit locator square in which your station operates, plus 10 points for each locator square worked, plus 1 point per contact. Multiply the total by the band multiplier as follows:

6 m	2 m	70 cm	23 cm	Higher
x 1	x 3	x 5	x 8	x 10

Then total the scores for all bands.

Cover Sheet

The cover sheet should contain the names and callsigns of all operators; postal address; station location and Maidenhead locator; the section(s) entered; the scoring table; and a signed declaration that the contest manager's decision will be accepted as final.

Please use the following format for your scoring table. In this example the operator has operated from one locator and worked four locators on each band: (See Table below)

A blank cover sheet, with scoring table, is available on the Field Day page of the WIA web site.

Entries

Paper logs may be posted to the Manager, VHF-UHF Field Day, 3 Vernal Avenue, Mitcham, Vic 3132. Electronic logs can be e-mailed to vhf-contests@wia.org.au Acceptable log formats include: ASCII text, RTF, DOC, DOCX, XLS, MDB, PDF, or any Open Document format. Logs must be received by Monday, 5 July 2010. Early logs would be appreciated. The Field Day website also includes a sample cover sheet, including a scoring table.

Field Day Web Site: http://www.wia.org.au/members/contests/vhfuhf/

This site includes the rules for the next Field Day, rules and results of all past VHF-UHF Field Days, cover sheets and scoring tables, and other information.

Special 2010 Field Day Cumulative Certificate

Do you intend to participate in all three VHF-UHF Field Days in the coming year?

Here is an extra incentive for you. Special certificates will be awarded in December 2010 to the entrants who have participated in all three 2010 Field Days.

The certificates will be based on callsign, so to be eligible you must operate under the same callsign each time.

Band	Locators Activated (10 points each)	+	Locators Worked (10 points each)	+	QSOs (1 point each)	x	Multiplier	=	Band Total
6 m	10	+	40	+	40	x	1	=	90
2 m	10	+	40	+	30	x	3	=	240
70 cm	10	+	40	+	20	x	5	=	350
etc.									
Overall Total								=	680

Microwave Challenge – January 2011

The Summer Field Day for 2011 will cover all bands as usual. But it will also include a "Microwave Challenge", with special certificates to be awarded to the participants on microwave bands. So if you have been planning to add microwave gear to your station, now is the time to start preparing!

Worked All Europe DX Contest 2009 – how the VKs went

Congratulations to Steve VK3TDX for achieving the Triple Crown in topping Australian scores in all three contests in 2009.

SSB SOAB HP

VK3TDX #1 in Australia and #2 in Oceania with 24,310 points

SSB SOAB LP

VK8PDX #1 in Australia and #7 in Oceania with 1,530 points

RTTY SOAB HP

VK3TDX #1 in Australia and #2 in Oceania with 400,384 points

RTTY SOAB LP

VK7AD #1 in Australia and #4 in Oceania with 12,285 points

VK8PDX #2 in Australia and #5 in Oceania with 10,379 points

CW SOAB HP

VK3TDX #1 in Australia and #2 in Oceania with 85,432 points

VK6HZ #2 in Australia and #5 in Oceania with 96 points

CW SOAB LP VK4TT #1 in Australia and #4 in Oceania with 630 points

VK2PN #2 in Australia and #5 in Oceania with 414 points

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2010 Ross Hull Memorial VHF-UHF Contest Results are on page 53

Hamadsclassifieds free to members

FOR SALE – VIC

Yaesu HF transceiver, FT-107M, plus FV-107 external VFO. Both items in very good condition. $300 or offer. Local pick-up only.
Phone Terry VK3YJ, 03 9315 0186.

FOR SALE – NSW

HyGain 14AVQ HF vertical, negotiable; Ringo Ranger 2 metre vertical, negotiable; MDS downconverter, $5; N and SO 239 switches, filters, SWR bridges, magnetic bases and mobile whips, negotiable; Digital satellite RXs, UEC DSD660, $150; Nokia 9500S with DVB2000 S/W, $150; Xanadu DSR, $50; Zenith DTH300-S, $5; 2xPace DGT400's, $5 each. Analogue satellite RX, Pace IRD50, $5.
Contact Roger VK2DNX, vk2dnx@hotmail.com or phone 02 9546 1927.

Package 1: 2.4 metre solid ACESAT dish on polar mount, Chaparral CoRotor 2 C/Ku feed, Norsat Gold 15K C band LNB, Gardiner .7 dB Ku LNB, 24" actuator, Chaparral MC115 RX (dish controller), Inclined Orbit Tracker, $300.
Package 2: 2.4 metre mesh dish on polar mount, Chaparral C band polarator feed, Norsat Gold 15K C band LNB, 24" actuator, Winersat WR920 RX dish (dish controller), $240.
Contact Roger VK2DNX, vk2dnx@hotmail.com or phone 02 9546 1927.

Satellite parts, various – Supertrack dish controller, $50; Dynalink C band LNBF 'one cable solution', $15; California amp C band LNBF 25K, $30; Chaparral model C Ku LNB, 9.75/10.75 GHz LO's, $40; ACESAT twin Ku LNBF's, $25 each; California amp KU LNBF, $15; Sharp Ku LNBF's, $15 each; DX antenna DSA527N Ku LNBF, $5; 2xDX antenna DSA527D Ku LNBF's, $5 each; 1.7 GHz LNA's, $10 each; Zinwell SAB-09C coax relays, $15 each; 4xIrdeto CAM's, not CI, various ages and S/W, $30 each; AWA RL 1500C RX tuned to 1.691 MHz, $20; many other miscellaneous satellite parts.
Contact Roger VK2DNX, vk2dnx@hotmail.com or phone 02 9546 1927.

Icom IC-706MkIIG, SN 016339, HF, 6 m, 2 m and 70 cm TX (160 m to 70 cm), output power 100 watts on HF and 6 metres, 50 watts on 2 metres and 20 watts on 23 cm. DSP and IF passband tuning, providing superior interference rejection. Noise blanker, speech compressor, SWR graph function, simple band scope, 107 memories with alpha numeric name capability, and much more. The radio has been thoroughly tested and is in VG condition with mike, original box, manual, DC leads and connectors. $900.00 ONO.
Neil VK2NL, QTHR. Phone 02 9894 5678 or mobile 0418 243 880, or neil.cornish@bigpond.com

WANTED – NSW

Yaesu FT-102 transceiver, any condition, cash or swap for a Yaesu FT-900 in excellent condition. **SMS 0488 771 480, phone 02 4422 9445 or email roberttilbury@ymail.com**
Thanks for reading, Robert VK2LOZ.

FOR SALE – QLD

Icom IC-746 Pro HF/6 M/70 cm TX, SN 0025110, like new with manual, hand mike and Icom desk mike IC-MS6, SN 17216, $1500.
30 amp peak PS, SN 230553, with man. $130.
External SDC DSP audio filter and speaker in a case, $100.
Yaesu FL-2000Z, 400 watt linear, SN102279 with manual, full output, $650.
Emtron EAT 2000 cross needle 2 KW tuner, $350.
MFJ 267, 2 KW, cross needle, dummy load / SWR and output RMS and PEP, $180.
MFJ 269 antenna analyser with manual, HF/VHF/UHF, $370.
Revex W750, 200 W SWR meter, HF to UHF, $100.
Alinco 435T 70 cm 50 watt FM TX with manual. Never used, new condition, $220.
Gold Star 60 MHz dual channel CRO with manual. Has time delay features. SN 90100561, $250.
1 kW 240/240 isolation transformer, $50.
Hustler 5-BTV vertical, 80 to 10 metres, fair condition, $200.
Comet GP15 vertical antenna, 2 m/70 cm, 8 dbi gain, $100.
Approximately 20 metres Heliax cable terminated with gold C connectors, $120.
Four only eight metre steel and aluminium antenna poles, to suit a dipole or loop antenna, $75. **Peter VK4PO, QTHR Phone 07 3390 1129 or 0417 785 677.**

Mobile One Australia Hamtenna, Models M20-1 and M40-1, both as new, for the simple reason that I purchased them to go west, and never got to use them. $20.00 each, plus postage.
Harry VK4EL, phone 07 5445 2647 or email glenviewinfo@optusnet.com.au

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'Hamads' PO Box 2042 BAYSWATER VIC 3153
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FOR SALE – SA

VK5JST antenna analyser kits are available. Refer article AR, December, 2009. Build yourself an extremely useful item for your shack, and improve your antenna efficiency. For more details see www.scarc.org.au, email kits@scarc.org.au or contact SCARC, Box 333, Morphett Vale. SA. 5162.

Want a fairly simple project for your club or would you just like to build a kit project for yourself? The Repeater Over Timer could be just the thing. It lets you know when you have been talking for long enough on the repeater. See November 2009 issue of AR. The Elizabeth Amateur Radio Club has kits available for this device, which uses only one IC and a handful of minor components. It is switched on by the transmitter's RF output and draws no current when not active.
Kits are available from the EARC for $35.00 plus $6.00 P+P. See www.earc.org.au or phone the club on 08 7123 4080.

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AJ2010

Continued from page 34

The 20 metre Yagi, mounting and damaged feeders fixed, the 10 metre Yagi was replaced with the FGARC tri-band Yagi.

The 15 metre Yagi was replaced with the 40M Yagi.

Rotators were adjusted for alignment.

Tree branches were cut to allow the 80/40 metre Delta to be fixed for 80 metres and an 80 metre dipole erected.

A five-band vertical was installed on the building roof with a feeder into Bay A, intended primarily for 30 metre use.

For the Jamboree, additional operators were provided from the following clubs and FGARC wishes to extend their thanks for co-operation and assistance given so willingly.

Blue Mountains Amateur Radio Club.

Illawarra Amateur Radio Society.

Liverpool & District Amateur Radio Club.

Hornsby & District Amateur Radio Club.

Peel Amateur Radio Group (WA).

At the conclusion of the Jamboree, a presentation was made by the Deputy Director Activities 22nd Australian Jamboree AJ2010 Bryan Davison to FGARC in recognition of their efforts.

Thanks to VK2LOL and VK2FLMK for photographs.

ar

Photo 14: Members of FGARC, BMARC, IARS, LADARC and PARG at the end of AJ2010. L-R VK2TG, VK2AU, VK2JCN, VK6LL, VK2HKF, VK2MCI, VK2HRC, VK2VVV, VK2TAR, VK2ZWK and VK2FRW.

Continued facing page

Three generations of amateur radio operators

(Notes and photos kindly supplied by David VK2LOL)

Saturday 9 January 2010 at the Australian Jamboree saw many visitors to Cataract Scout Park and the day was made 'special' for Emma VK2FEMM (Jamboree Troop 322) when her mum, Gai VK2FGAI, and Grandfather, Les VK2APE, visited the Park.

Emma had a goal to get her licence before the Jamboree and worked hard to obtain her licence in August 2009. Gai studied for and obtained her licence at the same time to support Emma. Emma's other main interest is acting.

Les VK2APE (Les also holds VK2LP) first became interested in amateur radio through contact with an amateur that lived around the corner when he was at primary school in Dubbo. In 1973, Les moved from Dubbo to Newcastle, did a radio course at technical school and achieved his licence. Whilst driving to and from work, he would sound out number plates of other cars for practice.

He has a cap with a 2 m/70 cm antenna mounted in the crown which he uses with his handheld when walking, but only at night. Les also has a Fiji amateur licence (3D2LP) and travels there when required to renew that licence.

During the 1989 Newcastle earthquake, Les was working in an office in Charlestown. He cleared all staff from the building and then provided WICEN communications from the amateur radio set on his motorcycle parked in the street. Les has been a member of the Ulysses Club since 1989.

During the Jamboree, Emma had a QSO (from her troop camp) with Les (at home) via an IRLP node at the Jamboree.

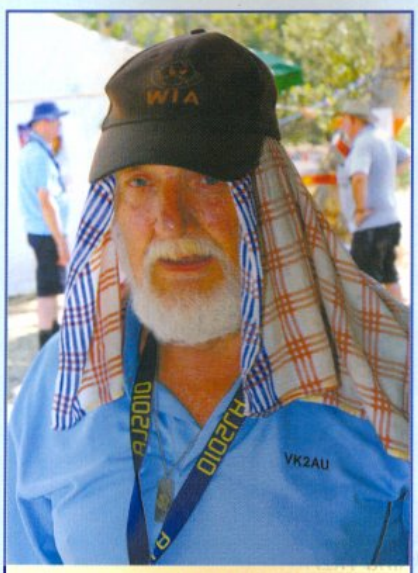

Photo 11: Ted VK2AU took refuge from the 42° heat by providing his own style of sunshade.

Photo 15: VK2ZWK being presented with a recognition plaque by Bryan Davidson, Deputy Director Activities, 22nd Australian Jamboree.

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